

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from non-residents of North America until the expiration of ninety (90) days from August 15, 1931.

MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	35 years	12 years*	5 years
Associate Member	Qualified to direct work	27 years	8 years*	1 year
Junior	Qualified for sub-professional work	20 years†	4 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers	35 years	12 years*	5 years
Fellow	Contributor to the permanent funds of the Society			

* Graduation from a school of engineering of recognized reputation is equivalent to 4 years active practice.

† Membership ceases at age of 33 unless transferred to higher grade.

LIST OF APPLICANTS.

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PEOPLES, HAROLD D.....	Garden City, Kans.....	193	TERRY, FRANCIS H.....	Bay Shore, N. Y.....	202
PETERSON, CARL H.....	Chicago, Ill.....	193	THOMAS, DAN H.....	Santa Ana, Cal.....	202
PFU, RALPH L.....	Washington, D. C.....	193	THOMAS, MENDALL P.....	Rosindale, Mass.....	202
PFISTER, CHARLES R.....	Baltimore, Md.....	194	THOMAS, PAUL G.....	Philadelphia, Pa.....	203
PHILLIPS, JAMES E.....	Los Angeles, Cal.....	218	THOMAS, PAUL I.....	Hillside, N. J.....	203
PHILPOTT, EUEL F.....	Corvallis, Ore.....	194	THOMPSON, GEORGE D., JR.....	Ronsseleer, N. Y.....	203
PIERLEONI, CARL.....	New York City.....	194	TOOMBY, THOMAS J., JR.....	Brooklyn, N. Y.....	203
PILLSBURY, CHARLES S.....	Chicago, Ill.....	194	TOUSEY, BERTLAND J. G.....	Portland, Ore.....	203
PIPPARD, ALFRED J. S.....	Bristol, England.....	194	TRAPP, ARTHUR J.....	Portland, Me.....	231
PIROK, JOHN N.....	Staunton, Ill.....	195	TRUE, JAMES N.....	Urbana, Ill.....	203
POLI, THOMAS.....	New York City.....	195	TUCKER, JOHN T.....	Berkeley, Cal.....	203
PORE, FRANK W.....	Los Angeles, Cal.....	195	TULL, ROBERT A.....	Faducal, Tex.....	203
PORTER, EARL L. F.....	Center City, Minn.....	195	TURNER, CLINTON C.....	Westfield, N. J.....	203
POTTS, CHARLES E., JR.....	West Haven, Conn.....	195	TURNER, HENRI B.....	Everett, Mass.....	204
POWELL, CARL A.....	Los Angeles, Cal.....	195	TWIGG, EDWARD V.....	Coraopolis, Pa.....	204
POZE, SAMUEL.....	Rochester, N. Y.....	196	UTTI, WILLIAM L.....	Chicago, Ill.....	204
PRATER, HERBERT E.....	Kansas City, Kans.....	196	VAIL, JOHN J.....	Rahway, N. J.....	223
PRESTIN, VERO E.....	Westerly, R. I.....	196	VEBOH, JOHN.....	Louisville, Ky.....	204
RANDIG, WESLEY H.....	Troy, N. Y.....	196	VICENTE, ELISIO F.....	New York City.....	204
RANKIN, ARDERY R.....	San Jose, Cal.....	196	VOLDRICH, C. B.....	Chicago, Ill.....	204
RAPP, HENRY C.....	Tocopilla, Chile.....	229	WALKER, OTIS H.....	Columbia, Kans.....	204
REANTILLO, TROFILO P.....	Jersey City, N. J.....	196	WALLACE, GORDON.....	New York City.....	205
RECK, JAMES H.....	Briar Cliff M., N. Y.....	196	WALLER, ROBERT O.....	Paris, Ill.....	205
REDD, CARL L.....	Point Pleasant, W. Va.....	196	WARE, WALTER J.....	Rolla, Mo.....	205
REIDMAN, WALTER A.....	Little Rock, Ark.....	196	WATSTEIN, DAVID.....	Washington, D. C.....	205
REY, RICHARD F.....	Lansing, Mich.....	196	WATTERS, HENRY B.....	Columbus, Ohio.....	205
RITCHIE, OSCAR T.....	Tacoma, Wash.....	197	WEAVER, HILLAND C.....	Rule, Tex.....	205
ROBERT, LOUIS E. J.....	New York City.....	197	WEINKAUFF, HENRY C. C.....	Glendale, N. Y.....	205
ROBERTS, CYRUS M.....	Scranton, Pa.....	197	WEIMAN, IRVING M.....	New York City.....	231
ROBINSON, HARLAN B.....	Pasadena, Cal.....	197	WEINSTEIN, HENRY.....	Rock Springs, Wyo.....	205
ROBINSON, JOHN E.....	Brooklyn, N. Y.....	229	WEINSTEIN, HOWARD.....	Hartford, Conn.....	206
ROCKETT, LOUIS C.....	Santa Fe, N. Mex.....	218	WEISS, FREDERICK M.....	Princeton, N. J.....	206
ROSE, EDWIN.....	Cincinnati, Ohio.....	197	WEITZEL, HAROLD R.....	Pittsburgh, Pa.....	206
ROSE, JESSE E.....	Henderson, Tenn.....	197	WELLS, HEBBER.....	Malden, Mass.....	206
ROSS, MARION D.....	Covington, Ky.....	219	WENGER, FRANCIS E., JR.....	St. Louis, Mo.....	206
RYAN, JOHN H.....	Livermore, Cal.....	197	WERNER, ARTHUR V.....	Moscow, Idaho.....	206
SAVARESE, LOUIS B.....	New York City.....	198	WHITCOMBE, FRANCIS H.....	Anamosa, Iowa.....	206
SAWYER, ROBERT W., JR.....	Ashland, Me.....	198	WHITE, HERBERT L.....	Urbana, Ill.....	231
SCHOTT, EUGENE A.....	Dover, Ohio.....	198	WIGGINTON, JAMES G.....	Louisville, Ky.....	206
SCHUYLER, WALTER W.....	Oriente, Cuba.....	219	WILEY, TARLEY T.....	Champaign, Ill.....	206
SEAL, BENJAMIN C.....	Farmer City, Ill.....	198	WILKERSON, J. M., JR.....	Atlanta, Ga.....	206
SEXTON, CLARENCE W. N.....	Victoria, Australia.....	219	WILL, CHARLES C.....	Louisville, Ky.....	206
SEYMOUR, EDWIN N.....	Atlanta, Ga.....	220	WILLARD, ERNEST C.....	Portland, Ore.....	223
SHARKEY, FRED J.....	Wenatchee, Wash.....	198	WILLIAMS, HERBERT L.....	New Orleans, La.....	207
SHAW, CLARK H.....	Long Beach, Cal.....	220	WILSON, JOHN W.....	New Orleans, La.....	207
SHELEY, JOE A.....	Austin, Tex.....	198	WILSON, LOREN A.....	Rolla, Mo.....	207
SHELLARD, GORDON D.....	Ridgewood, N. J.....	199	WINSTON, HERBERT O.....	West Orange, N. J.....	207
SHOAF, ROSE T.....	San Francisco, Cal.....	199	WOOD, GEORGE M.....	Maroa, Ill.....	207
SLOANE, BEN H.....	Marysville, Tenn.....	199	WOODS, ROBERT J., JR.....	Atlanta, Ga.....	207
SMEDBERG, CARL W.....	Greensboro, N. C.....	221	WREDE, F. W., JR.....	Jackson Hts., N. Y.....	207
SMITH, ARTHUR A.....	Dorchester, Mass.....	199	WRIGHT, GEORGE C.....	Rochester, N. Y.....	208
SMITH, RUSSELL L.....	San Francisco, Cal.....	199	YOUNGQUIST, CARL V.....	Columbus, Ohio.....	208
SNOUSE, JOHN P.....	St. Joseph, Mo.....	199	ZAHORIK, PETER A.....	Wauwatosa, Wis.....	208
SNAYLEY, HARRY G.....	Buffalo, N. Y.....	199	ZEPF, PAUL L.....	Brunswick, Md.....	209
SNOW, EDWIN J.....	Chicago, Ill.....	199			

The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The number in the center above each record indicates the serial number of the applicant for the current year, and that at the left the district in which he resides.

The abbreviations in *italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figure for Total Time is determined by adding one-half the time spent in Sub-Professional Work to the time spent in Professional Work. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of four years for graduation or of one-half of a year for each academic year successfully completed in an engineering college without graduation is included in Total Time and Professional Work.

FOR ADMISSION

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(1) ACKERSON, WARREN CROSSMAN, Lake View Ave. East, Brightwaters, N. Y. (Age 22. Born Brooklyn, N. Y.) 1931 B. S., Pol. Inst. of Brooklyn. *TT* 4: *P* 4. Refers to H. R. Codwise, H. P. Hammond.

461

(7) ADLER, ORVAL CARL, 5329 North Teutonia Ave., Milwaukee, Wis. (Age 21. Born Milwaukee, Wis.) 1931 B. S., Univ. of Wis. *TT* 4: *P* 4.—Summer 1929 Draftsman, Wisconsin Bridge & Iron Co.—*TT* 4: *P* 4. Refers to F. E. Turneure, L. F. Van Hagan.

462

(2) ALBERT, SIDNEY GUSSMAN, 527 Beacon St., Boston, Mass. (Age 22. Born Brooklyn, N. Y.) 1929 C. E., Pol. Inst. of Brooklyn. *TT* 4: *P* 4.—Summers, 1929 and 1930 Field Engr., Corson Constr. Corporation, New York City, being Engr.-in-Chg. of soil tests and Section Engr. in field underpinning, on subway construction. *TT* 0.5: *P* 0.5: *RC* 0.5.—Sept. 1929 to June 1930 and Sept. 1930 to June 1931 Research Asst. in Soil Mechanics, Civ. Eng. Dept., Massachusetts Inst. of Technology. *TT* 1.5: *P* 1.5.—*TT* 6: *P* 6: *RC* 0.5. Refers to H. P. Hammond, G. Paaswell, C. M. Spofford, E. J. Squire, L. White.

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(9) ALLEN, MARK LAWRENCE, 1505 North Limestone St., Springfield, Ohio. (Age 22. Born New York City.) 1931 B. C. E., Ohio State Univ. *TT* 4: *P* 4. Refers to R. A. Allton, L. Lee.

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(15) ALLISON, LIMUEL RILEY, Des Moines, N. Mex. (Age 36. Born Americus, Ga.) Student, South Georgia Coll. (through Junior year) and Univ. of New Mexico (1 year). *TT* 0.5: *P* 0.5.—May 1917 to Nov. 1918 Transitman, U. S. Dept. of Interior, Juneau, Alaska, on subdivision and townsite work, made field plots, etc., had charge of party. *TT* 1.5: *P* 1.5.—Jan. to Nov. 1919 Transitman in charge of party and of location, Feb. 1924 to March 1925 Res. Engr. (under Dist. Engr.) in charge of construction of four Federal Aid projects, involving changes in plans and design, and May 1927 to July 1928 Locating Engr. and Res. Engr. in charge of location and also construction, involving changes in plans, all for New Mexico Highway Dept. *TT* 3: *P* 3: *RC* 3: *D* 1.7.—Nov. 1919 to Jan. 1923 Transitman, Locating Engr. and Res. Engr. on construction, with County Engr., Eastland County; had charge of locating party, and later designed, made plans and had charge of road construction. *TT* 3.2: *P* 3.2: *RC* 3.2: *D* 1.5.—Jan. 1923 to Feb. 1924 in private practice, Eastland County, Tex., locating and plotting oil tracts, buildings, etc. *TT* 1.1: *P* 1.1: *RC* 1.1: *D* 1.1.—March 1925 to May 1927 with Texas Highway Dept., until April 1926 as Asst. State Highway Engr. in charge of organization, design and construction, then Res. Engr. of Stephens County, Tex., in charge of design and construction of road program (\$1 500 000). *TT* 2.2: *P* 2.2: *RC* 2.2: *D* 2.2.—July 1928 to date member of firm, Everly & Allison, Gen. Highway Contrs., Des Moines, N. Mex., in charge of construction (\$1 500 000), including several large bridges.

TT 3: P 3: RC 3: D 1.—**TT 14.5: P 14.5: RC 11.7: D 7.5.** Refers to F. A. Berg, G. F. Conroy, W. C. Davidson, G. E. Franklin, N. Hanson, C. S. Henning, Jr., W. R. Hutchins, G. D. Macy, L. C. Rockett, G. G. Wickline.

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(4) **ANDREWS, EARLE TOPLEY**, P. O. Box 601, Mt. Union, Pa. (Age 29. Born Fowlerville, N. Y.) Nov. 1923 to May 1924 and Dec. 1924 to June 1925 student in Civ. Eng., Washington and Lee Univ.—Nov. 1923 to May 1924 Res. Engr., F. R. Sweeny & Co., Cons. Engrs., Anderson, S. C., on field layout, inspection and estimates for construction of Washington and Lee Univ. stadium, Lexington, Va. **TT 0.6: P 0.6: RC 0.6.**—June 1925 to March 1927 Engr. for W. B. Simpson, Huntingdon, Pa., in charge of building construction, etc. **TT 1.8: P 1.8: RC 1.8.**—March to Nov. 1927 Engr. for W. D. Steinbaugh's Sons, Gen. Contrs., Lewistown, Pa., supervising building construction, preparing plans, estimates, etc. **TT 0.7: P 0.7: RC 0.7.**—April to Sept. 1921 Draftsman on industrial plant design and layout, Feb. 1922 to Oct. 1923 Draftsman and Field Engr. on mechanical and structural drafting and supervision of field engineering on plant construction, June to Dec. 1924 Engr. on industrial plant design and supervision of field engineering and construction and Nov. 1927 to date Engr. in responsible charge of structural and mechanical design and construction, also surveys, reports, estimates, etc., all for Pennsylvania Glass Sand Co., Lewistown. **TT 5.7: SP 0.6: P 5.1: RC 4: D 1.5.**—**TT 8.8: SP 0.6: P 8.2: RC 7.1: D 1.5.** Refers to J. B. Ferguson, W. T. Lyle, I. H. Parker, J. G. Shryock, F. R. I. Sweeny, A. M. White.

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(1) **ANDREWS, NICHOLAS ATHAN** (formerly Andriopoulos), 148 West Sixty-seventh St., New York City. (Age 31. Born in Greece.) 1931 B. S. in Civ. Eng., N. Y. Univ. **TT 4: P 4.**—1920 to 1924 with Xenakis Bros., alterations to and making fixtures for houses, stores, flower shops, restaurants, etc.; 1½ years on shop work, then in drafting room, and finally taking measurements, sketching, etc. on prospective jobs. **TT 3: SP 1.5: P 1.5: RC 0.5.**—1924 to 1925 surveying, cross-sectioning and computing of excavating, Hendrickson Bros., Inc., Valley Stream, N. Y. **TT 0.4: SP 0.4.**—1925 to 1926 Surveyor and Leveler, Water Dept., Borough of Queens, N. Y. **TT 0.4: SP 0.4.**—**TT 7.8: SP 2.3: P 5.5: RC 1.** Refers to E. J. Critzas, F. H. Guerin, E. G. Hooper, C. T. Schwarze, D. S. Trowbridge.

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(14) **ARCHIBALD, RAYMOND**, 1616 Gum St., North Little Rock, Ark. (Age 34. Born Albany, Ore.) 1919 B. S. in Civ. Eng., Ore. State Coll. **TT 4: P 4.**—Aug. to Nov. 1914 Rodman, U. S. Geological Survey.—May to Nov. 1917 and May 1919 to May 1923 with Oregon State Highway Comm., until Nov. 1917 as Chairman and Transitman; May 1919 to May 1920 Structural Draftsman and Bridge Designer, Bridge Dept., on layouts, designs, details and estimates for bridges; May 1920 to Jan. 1921 Bridge Inspector, and after Jan. 1921 Res. Bridge Engr., on bridge construction. **TT 4.1: P 4.1: RC 2.9: D 0.5.**—May 1923 to Sept. 1925 Project Engr., Missouri Highway Comm., on road and bridge construction. **TT 2.3: P 2.3: RC 2.3.**—Sept. 1925 to date with Arkansas Highway Comm., until July 1927 as Bridge Designer on layouts, designs, details and estimates for bridges, and since then Asst. Bridge Engr. in charge of design, plans and specifications for bridges. **TT 5.8: P 5.8: RC 5.8: D 5.8.**—**TT 16.2: P 16.2: RC 11: D 6.3.** Refers to N. B. Garver, R. C. Gibson, O. L. Hemphill, D. A. MacCrea, C. B. McCullough, H. P. Mobberly, G. S. Vincent, W. W. Zass.

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(4) **ARMSTRONG, FRANCIS WALLIS, Jr.**, Moorestown-Riverton Rd., Moorestown, N. J. (Age 24. Born Moorestown, N. J.) 1931 B. S. in Civ. Eng., Princeton Univ. **TT 4: P 4.** Refers to G. E. Beggs, F. H. Constant, F. A. Heacock.

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(15) **ATKINSON, FRANK MARSHALL**, Box 57, Cimarron, N. Mex. (Age 40. Born Philadelphia, Pa.) Irrigation Expert, State of New Mexico. 1915 B. S. in Civ. and Irrigation Eng., Colo. State Agri. Coll. **TT 4: P 4.**—Summer 1914 and July to Aug. 1915 Irrigation Asst., U. S. Dept. of Agriculture, Div. of Roads and Rural Eng., in hydraulic laboratory, Ft. Collins, Colo.—Aug. to Dec. 1915 Drainage Inspector with E. B. House, Ft. Collins, inspecting placing of drain tile. **TT 0.2: SP 0.2.**—May to Sept. 1917 Engr. with State Engr. of Idaho, gauging streams and inspecting ditches. **TT 0.3: P 0.3.**—Sept. 1918 to April 1919 Second Lieut., 113th Engrs., A. E. F., France, general engineering and construction on roads, stone quarry, drilling well, steel erection, etc.; 10 days in command of Co. B. **TT 0.5: P 0.5.**—July 1919 to July 1920 with Douglas (Wyo.) Reservoirs Co., first as Hydrographer on design of submerged orifice headgates, etc., and after Dec. 1919 Supt., LaPrele Project on operation and maintenance and construction of small structures. **TT 1: P 1: RC 0.6: D 0.4.**—July to Dec. 1920 Hydrographer, U. S. Geological Survey, Water Resources Branch, on stream gauging. **TT 0.4: P 0.4.**—July-Dec. 1921 and March to June 1923 (intermittently) Instrumentman, U. S. Reclamation Service, level and transit work on lateral cleaning and canal

location, Ft. Laramie Canal and grades. *TT 0.2: SP 0.2.*—July 1923 to March 1924 Bldg. Inspector, Sinclair Pipe Line Co., being Res. Engr. on oil pumping station (\$250 000). Ft. Laramie, Wyo. *TT 0.7: P 0.7: RC 0.7.*—April 1924–Feb. 1925 Instrumentman, U. S. B. R. hydrography, North Platte River Patrol, 180 miles of channel, Nebraska-Wyoming. *TT 0.9: P 0.9.*—July 1925 to Feb. 1926 Engr., and Aug. 1926–April 1928 Asst. State Engr. with State Engr. of New Mexico, on irrigation investigations, after Aug. 1926 being in control on seven projects (over \$100 000), work included purchasing engineering equipment, inspecting water-right applications, acting for State Engr. at hearing of Water-Right Application No. 1734, and later acting for State Engr. and for Interstate River Commr. drew up first Gila River interstate agreement and classified over 76 000 acres in Cimarron River basin. *TT 2.2: P 2.2: RC 2.2.*—Feb. to May 1926 Engr., Virden Water Committee on irrigation investigations for proposed Virden Irrigation Dist., Duncan, Ariz. *TT 0.3: P 0.3: RC 0.3.*—May 1928 to date Water Master, 8th Judicial Dist., New Mexico, on measurement and division of irrigation water and study of duty of water (36 764 acres) under Cimarron River. *TT 3.2: P 3.2: RC 3.2.*—*TT 13.9: SP 0.4: P 13.5: RC 7: D 0.4.* Refers to R. Follansbee, N. Hanson, T. H. McCarthy, G. M. Neel, O. H. B. Turner, W. H. W. Yeo.

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(1) **ATWOOD, GILBERT HUMPHREY**, 200 Lincoln Pl., Brooklyn, N. Y. (Age 33. Born Newton, Mass.) Licensed Structural Engr., State of New Jersey. 1926 C. E., Pol. Inst. of Brooklyn.—Feb. 1918 to July 1921 (except Sept. to Dec. 1918 with U. S. Army) Draftsman, until Sept. 1918 with Turner Constr. Co., New York City, drafting and detailing on concrete buildings, Dec. 1918 to Feb. 1920 and April 1920 to Feb. 1921 with New York Central R. R., Dept. of Structural (Bridges), computing and investigating bridges, viaducts, etc., for increased loadings, repair, strengthening, renewal, etc., Feb. to April 1920 with Chilean Exploration Co., on power plant buildings for Chile, and after Feb. 1921 with Hudson River Bridge Corporation, New York City, on maps, railway trackage and terminal facilities for 57th St. Hudson River Bridge project. *TT 1.7: SP 1.7.*—July 1921 to May 1930 successively Inspector, Draftsman, Designer and Asst. Engr. with Clarence W. Hudson, Cons. Engr., New York City, and May 1930 to date member of firm, C. W. Hudson, Inc., being Asst. Engr., Vice-Pres. and Secy., being Inspector on Hill-to-Hill bridge, Bethlehem, Pa., inspecting work and materials for concrete and steel bridge work and checking construction drawings (2½ years), Inspector and Draftsman, New Jersey State Highway Dept., on Victory bridge, Perth Amboy, N. J., inspecting concrete, steel and movable bridge work, in charge of concrete, checking construction drawings, etc., finally as Res. Engr. (27/10 years), Asst. Engr. on various designs and investigations (about 9 months), Res. Engr. in full charge of engineering supervision of construction of Albany Ave. bridge (concrete), Atlantic City, N. J. (approx. \$180 000) (about 4 months), Asst. Engr. in charge of location survey, borings, design and contract drawings for, and Res. Engr. in charge of construction of, Washington Bridge (\$3 040 000), Providence, R. I. (2½ years), since May 1930 in charge of survey, borings, computations and design to determine location, type and cost of proposed bridge over Connecticut River near Hartford, Conn. *TT 7.7: P 7.7: RC 5.3: D 4.7.*—*TT 10.6: SP 2.9: P 7.7: RC 5.3: D 4.7.* Refers to J. W. Hackney, H. P. Hammond, W. N. Hazen, G. H. Henderson, C. W. Hudson, S. B. Knox, Z. H. Sikes, H. W. Troelsch.

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(11) **AULTMAN, WILLIAM WHITESCARVER**, 6161 Barrows Drive, Los Angeles, Cal. (Age 25. Born Trinidad, Colo.) 1927 B. S., Cal. Inst. Tech. *TT 4: P 4.*—July 1927 Tech. Investigator, Business Agents Div., Bureau of Power and Light, Los Angeles.—Aug. 1927 to July 1929 Field Engr., Radiore Co., on field work connected with electrical method of locating geological structural features, including interpreting results and compiling and preparing report. *TT 1.3: SP 0.6: P 0.7: RC 0.7.*—July 1929 to March 1930 Research Engr., Electroblacks, Inc., on research in conjunction with inventor on method and apparatus for producing carbon black from electrical discharge in oil. *TT 0.4: SP 0.4.*—May 1930 to date Jun. Hydrographic Engr., Metropolitan Water Dist. of Southern California, office and field investigations on water-supply problems for development of proposed Colorado River aqueduct. *TT 1.2: P 1.2.*—*TT 6.9: SP 1: P 5.9: RC 0.7.* Refers to C. C. Elder, W. W. Michael, F. Thomas.

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(15) **BAEHR, JEROME CLAUDIUS**, 908 Webster St., New Orleans, La. Graduating student awarded Louisiana Section prize. (Age 21. Born New Orleans, La.) 1931 B. E., Tulane Univ. *TT 4: P 4.*—Summers Rodman, with S. A. Calongne Sons, Engrs., New Orleans (1928) and with Orleans Levee Board on sea wall project along Lake Pontchartrain (1929 and 1930).—May 1931 to date Engr., Geo. J. Glover Co., Inc., on Flint Goodridge Hospital, New Orleans. *TT 0.2: P 0.2.*—*TT 4.2: P 4.2.* Refers to E. S. Bres, D. Derickson, W. B. Gregory, B. H. Grehan.

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(14) **BAKER, RUSSELL CURTIS**, U. S. Engr. Office, Vicksburg, Miss. (Age 26. Born in Barry County, Mich.) 1927 B. S. in E. (Civ.), Univ. of Mich. TT 4: P 4.—Sept. 1927 to July 1928 Eng. Student Salesman, American Blower Corporation, 5 months on laboratory testing of, then selling and laying out system of installation of, heating and ventilating equipment. TT 0.4: SP 0.4.—July 1928 to date with U. S. Engrs., until Aug. 1928 in Buffalo Engr. Dist. as Inspector on hydraulic surveys, and since Aug. 1928 in Vicksburg Engr. Dist., 9 months as Inspector and remainder of time Jun. Engr. in charge of hydraulic survey and computation, drafting reports on flood control, navigation, etc., estimates on flood control projects, including dams, ditches, levees, etc., and of hydrological studies. TT 3: P 3: RC 2: D 0.9.—TT 7.4: SP 0.4: P 7: RC 2: D 0.9. Refers to O. G. Baxter, F. G. Christian, G. R. Clemens, P. E. Cunningham, W. H. Holland.

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(1) **BANK, WILLIAM GEORGE**, 263 Vassar Ave., Newark, N. J. (Age 42. Born Newark, N. J.) Licensed Civ. Engr., State of New Jersey. 1909 graduated, Newark Tech. Evening School.—Dec. 1906 to Aug. 1913 with Central R. R. of New Jersey, until Nov. 1908 as Rodman, Leveler, drafting, computing and estimating, then Transitman, acting as Chf. of party on surveys, in field change of bridge construction, terminal yards, roads and sewers, harbor and sea-coast improvements and main-line track construction, drafting, estimating, and designing yard layout and harbor improvements. TT 5.4: SP 1.3: P 4.1.—Aug. 1913 to June 1914 Supt. Becker Constr. Co., Newark, in responsible charge of construction of electric power and substations, factory and mill construction estimates. TT 0.8: P 0.8: RC 0.8.—June 1914 to date with City of Newark, Div. of Water and (Aug. 1928 to April 1930) Bureau of Street Cleaning, until March 1917 as Levelman, acting as Chf. of party on surveys for dams, reservoirs, roads, pipe lines, etc., and stream-flow measurements, March 1917 to April 1930 Asst. Engr., supervising construction, preparing plans and designs in connection with raising of water-supply impounding dam, consisting of earth dam, concrete overflow, bridge and road construction, also plans, estimates, designs and reports on water supply projects (March 1917 to May 1922), in responsible charge of maintenance, construction and operation of water shed, and supervising plans, investigations, estimates and reports for water supply (Pequanook watershed) (May 1922 to May 1923), in responsible charge of construction, design, plans and specifications of water-supply structures, including 60-in. steel-pipe and 48-in. wood-stave conduits, reinforced concrete pipe galleries and gate vaults, intake works, and distribution mains, investigations and studies for water-shed development (May 1923 to Aug. 1928), supervising and directing street cleaning (including snow removal), refuse collection and disposal and basin cleaning (\$1 750 000 annually) (Aug. 1928 to April 1930), since April 1930 Asst. Div. Engr. in responsible charge of construction of 60-in. steel water conduit (25 000 ft., \$1 150 000), water-works operation, maintenance and construction, supervising plans, designs, estimates, specifications, investigations and reports on water-works structures, including collection, transmission and distribution (approx. \$3 500 000 annually). TT 17.1: P 17.1: RC 10.6: D 6.8.—TT 25.3: SP 1.3: P 22: RC 11.4: D 6.8. Refers to W. H. Boardman, J. A. Foulks, J. E. Garratt, E. S. Rankin, M. R. Sherrerd, J. L. Vogel.

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(15) **BANNERMAN, ROBERT CHARLES, Jr.**, Box 167, Jonesville, La. (Age 21. Born Tallahassee, Fla.) 1931 B. S. C. E., Univ. of Fla. TT 4: P 4.—Summer vacations Instrumentman, Florida State Road Dept.—At present Instrumentman, Louisiana State Highway Comm., on paving.—TT 4: P 4. Refers to R. P. Boyd, C. C. Brown, P. L. Reed.

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(16) **BARBER, IVAN WILMOT**, 1832 Jefferson Ave., Lincoln, Nebr. (Age 33. Born Ranger, Tex.) 1920 B. S. in Civ. Eng., Agri. & Mech. Coll. of Tex. TT 4: P 4.—June to Sept. 1920 Asphalt Plant Chemist, Pittsburgh Testing Laboratories, Birmingham, Ala., inspecting and testing asphalt pavements and materials. TT 0.1: SP 0.1.—Sept. to Dec. 1920, March to Dec. 1921 and March 1922 to March 1923 Asphalt Plant Chemist and Testing Engr., Western Laboratories, Lincoln, Nebr. TT 2.1: P 2.1: RC 1.1.—Dec. 1921 to March 1922 Graduate Student in Highway Eng., Univ. of Michigan.—March to July 1923 City Engr., Arlington, Tex., on design of storm sewer, subdivisions, establishing street grades, supervising paving. TT 0.3: P 0.3: RC 0.3: D 0.3.—July 1923 to April 1924 Res. Engr. in charge of oiled earth construction in Arlington, and Instrumentman on location and relocation for Tarrant County, Tex. TT 0.7: P 0.7: RC 0.2.—April 1924 to date Testing Engr., Western Laboratories, laboratory and field investigations of asphalt pavements and paving materials, designing asphalt and concrete mixtures, asphalt mastics and joint fillers. TT 7.2: P 7.2: RC 4.7: D 0.3.—TT 14.4: SP 0.1: P 14.3: RC 6.3: D 0.5. Refers to J. A. Bruce, D. L. Erickson, R. M. Green, E. Y. Grupe, Jr., C. C. Keirle, C. J. McNamara.

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(4) **BAREUTHER, CHARLES ADAM**, 5533 Greenway Ave., Philadelphia, Pa. (Age 40. Born Philadelphia, Pa.) 1912 B. S. in C. E., and C. E., 1931, Univ. of Pa. TT 4: P 4.—Summers 1911–1912 Asst. to Chf. Engr., Millard & Lupton Co., Philadelphia, Pa., assisting on surveying, inspecting, designing, estimating and cost data, Barge Canal, Rochester, N. Y. TT 0.3: P 0.3: RC 0.1: D 0.1.—Oct. 1912 to June 1913 Instructor in Civ. Eng., Univ. of Pennsylvania; TT 0.8: P 0.8.—June 1913 to Feb. 1915 and summers 1915 and 1916 with City of Philadelphia as Highway Inspector, Eng. Inspector and Asst. to Engr. in charge of boulevard construction, on inspection, specifications, materials testing, progress and cost data on highway work, and (summers) Special Inspector on plant inspection of brick, asphalt, wood block, cement and bituminous materials. TT 1.9: SP 0.3: P 1.6: RC 1.1: D 0.5.—Feb. 1915 to date Prof. of Physics, Central High School, Philadelphia, being Lecturer and Quiz Master in Physics; also Engr. of Tests, being Tech. Eng. Asst. to Commanding Officer in charge of personnel, U. S. Ordnance Dept. (June 1918 to Feb. 1920, part of time), Eng. Examiner, Civ. Service Comm., analyzing engineering positions, formulating tests, etc. (since Feb. 1920 part of time), and Prof. of Applied Physics, including Strength of Materials, Drexel Inst. Evening School, being Lecturer and Quiz Master (since Sept. 1920). TT 11.1: SP 4.8: P 6.3: RC 4.—TT 18.1: SP 5.1: P 13: RC 5.2: D 0.6. Refers to W. H. Gravell, W. S. Pardoe, C. B. Pyle, S. I. Sacks, C. S. Shaughnessy, C. H. Stevens, C. L. Warwick.

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(1) **BARRIE, WILLIAM**, 23 Hancock Ave., Yonkers, N. Y. (Age 26. Born Glasgow, Scotland.) 1931 B. S. in C. E., N. Y. Univ. TT 4: P 4. Refers to E. G. Hooper, C. T. Schwarze.

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(9) **BARTE, GEORGE RUSSELL**, 1941 Malvern Ave., Dayton, Ohio. (Age 28. Born Anderson, Ind.) 1929 B. S. in C. E., Purdue Univ. TT 4: P 4.—Summer 1922 Contr.'s Asst. on construction of small homes, etc.—Oct. 1924 to Sept. 1927 Transitman, and May 1929 to date Asst. City Civ. Engr., City of Dayton, Ohio, on design, construction, inspection of sewers, paving, surveys, estimates, etc. TT 5: P 5: RC 2: D 1.5.—TT 9: P 9: RC 2: D 1.5. Refers to G. F. Baker, C. S. Bennett, E. O. Brown, F. J. Cellarius, J. F. Hale, W. W. Morehouse, R. B. Prinz.

480

(1) **BEATTY, BLAKE ELWOOD** (formerly Blake Elwood Batty), 2820 Bailey Ave., New York City. (Age 34. Born Moorefield, Ont., Canada.) 1922 B. S. in C. E., Cal. Inst. Tech. TT 4: P 4.—Aug. 1915 to Nov. 1917 with Marconi Wireless Telegraph Co. of Canada, as Wireless Telegraph Operator in charge of installations aboard seven ship stations and Asst. Operator on three shore stations. Dec. 1917 to Feb. 1918 student, Govt. School of Navigation, U. S. Shipping Board, at Johns Hopkins Univ., Baltimore, Md.—Feb. to Nov. 1918 Deck Jun. Navigating Officer, aboard U. S. Army transport *Wyandotte*, in transatlantic service. TT 1.9: SP 1.2: P 0.7.—July to Sept. 1922 Asst. Field Engr., Earl B. Newcomb Co., Gen. Contrs., Los Angeles, Cal., on construction of 6-story reinforced concrete beam and girder warehouse and office building for Westinghouse Elec. & Mfg. Co. TT 0.2: P 0.2.—Sept. 1922 to July 1923 Asst. Structural Engr., until March 1923 with Walker & Eisen, Archts. and Engrs., then with Austin Co. of California, both of Los Angeles, on plans and design of buildings (steel mill, etc.). TT 0.8: P 0.8: RC 0.4.—Aug. to Oct. 1923 Office Labor Archt., Geo. B. Post & Sons, Archts., New York City, on plans and working drawings for design of Statler Hotel, Boston, Mass., and Roosevelt and Commonwealth Hotels, New York City (latter project abandoned). TT 0.2: P 0.2.—Oct. 1923 to Sept. 1927 with Kenn-Well Contr. Co., Gen. Contrs., New York City, until April 1924 as Asst. to Chf. Engr. on construction of New York Edison Co. Service Bldg. (10 stories, reinforced concrete flat slab, about \$3 000 000), then First Asst. Engr. on foundation construction for New York Edison Co.'s East River generating station, and design of concrete plant installation, and after April 1925 Chf. Engr. on same work, having technical field and office charge of construction covering foundation and superstructure and involving extensive waterfront substructure operations, including dock and tunnel, inshore and outshore, concrete construction (expenditure \$4 000 000). TT 3.9: P 3.9: RC 3.3: D 3.—Dec. 1927 to Feb. 1928 Structural Engr., United Steel Constr. Co., New York City, being Structural Designer on building frames. TT 0.2: P 0.2: RC 0.1: D 0.1.—Feb. 1928 to July 1929 Structural Engr. and Constr. Supt., Taylor-Fichter Steel Constr. Co., New York City, designed and was Field Supt. in charge of general construction of industrial buildings. TT 1.4: P 1.4: RC 1.2: D 1.—July 1929 to date Structural Designer, Purdy & Henderson Co., Cons. Engrs., New York City, on high building frames. TT 2: P 2: RC 1.6: D 1.5.—TT 14.6: SP 1.2: P 15.4: RC 6.7: D 5.6. Refers to F. W. Belknap, F. N. Benedict, J. L. Bogart, F. E. Cudworth, H. M. Hale.

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(6) **BELLADONNA, EDMOND LEO**, 510½ Virginia St., Charleston, W. Va. (Age 22. Born Logan, W. Va.) 1931 B. S. C. E., W. Va. Univ. TT 4: P 4. Refers to L. V. Carpenter, R. P. Davis.

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(1) **BENEJAM, RAUL GAYA**, Box 205, San Sebastian, Porto Rico. (Age 26. Born San Sebastian, Porto Rico.) 1927 B. S. in C. E., Tri-State Coll. of Eng.—1923 to June 1924 approved a Civ. Service examination for Topographical Draftsman—1924 to 1925 taught manual arts and mathematics at Maricao Cont. School and (spare time) on farm surveys.—April–Dec. 1927 Transltman, Isabela Irrigation Service, canals, surveys and design. TT 0.7: P 0.7: RC 0.7: D 0.7.—Jan. 1928 to Feb. 1931 with Dept. of Interior, San Juan, Porto Rico, until April 1928 as Asst. Engr. on road survey and design, then on highway construction, and after Sept. 1929 Dist. Supt. of public buildings, administrating repair work, construction and inspection. TT 3.2: P 3.2: RC 3.2: D 1.5.—Feb. 1931 to date designing small bungalows, dwellings, etc. TT 0.5: P 0.5: RC 0.3: D 0.3.—TT 4.3: P 4.3: RC 4.2: D 2.3. Refers to E. Baez Rodriguez, F. Fortuño-Selles, R. A. González, R. M. Snell, E. Totti y Torres.

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(11) **BENNETT, EARL ROBERT**, 5311 Third Ave., Los Angeles, Cal. (Age 22. Born Los Angeles, Cal.) 1931 B. S. in C. E., Univ. of Ariz. TT 4: P 4. Refers to E. S. Borgquist, F. C. Kelton, J. C. Park.

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(16) **BENTON, KELLY EDWARD**, 727 South Tejon St., Colorado Springs, Colo. (Age 23. Born Clinchport, Va.) 1931 B. S. in C. E., Univ. of Colo. TT 4: P 4. Refers to R. L. Downing, C. L. Eckel.

485

(2) **BERGSTEDT, CARL GUSTAVUS**, 98 French Ave., Brockton, Mass. (Age 21. Born Chicago, Ill.) 1931 B. S., Sheffield Sci. School, Yale Univ. TT 4: P 4.—Summer 1928 Draftsman with Schmidt, Garden & Erikson, Archts., Chicago, Ill.—TT 4: P 4. Refers to C. T. Bishop, J. C. Tracy.

486

(1) **BERNSTEIN, SAUL**, 60 East Forty-Second St., New York City. (Age 41. Born New York City.) Licensed Professional Engr. and State Surveyor, State of New York.—1909 B. S. in C. E., and 1912 C. E., New York Univ. TT 4: P 4.—Summers 1905 to 1909 Rodman, Instrumentman, N. & W. Ry., on preliminary location and construction.—1909 to 1914 Inspector, Board of Water Supply, City of New York, on tunnels, dams and field work—geological maps and reports, City Aqueduct Tunnel. TT 6: P 6: RC 4.—1914 to 1917 Pres. and Chf. Engr., Reinforced Concrete Eng. Co. TT 3: P 3: RC 3: D 2.—1917 to date Treas. and Managing Engr., Fredburn Constr. Corporation, 2 years on a housing development, Lavanburg Homes, 2 years on Pierrepont Hotel, Brooklyn, N. Y., 2 years on two 12-story apartment houses for 55 Ave. A Corporation, 1 year on foundation for Brooklyn Central Library for City of New York, and at present on Brooklyn Technical High School for Board of Education, City of New York, and for Thompson-Leopold-Fredburn Co., Inc., on Route 109, Sec. 3, Board of Transportation; also in general charge of construction work for the Corporation for City of New York and private individuals. TT 11: P 11: RC 11: D 5.—TT 24: P 24: RC 18: D 7. Refers to R. F. Almirall, W. W. Brush, J. Feld, J. Loewenstein, A. I. Ralsman.

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(9) **BIEBER, JOHN AUGUST**, 329 Hill St., Bucyrus, Ohio. (Age 23. Born Bucyrus, Ohio.) 1931 B. C. E., Ohio State Univ. TT 4: P 4.—Summers 1928 and 1929 Instrumentman on transit and level work, surveys, etc., Office of Res. Engr. (1928), and Draftsman on state highway and bridge plans, Instrumentman, Rodman and Recorder on highway and river widening and bridges (1929), Crawford County (Ohio) Engr.'s Office.—Sept. 1929 to March 1930 (while student) Draftsman, Columbus (Ohio) Heating & Ventilating Co., on heating layouts for industrial buildings and residences, experimental work on gas furnaces and unit heaters, detail drawing, calculations and minor estimates.—Summer 1930 Student Engr., U. S. Bureau of Public Roads, Div. of Management, time and efficiency studies on Federal highway construction, tests and reports on concrete.—TT 4: P 4. Refers to C. T. Morris, C. E. Sherman, R. C. Sloane.

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(15) **BIGGERS, JAMES BRADFORD**, 5705 Reiger Ave., Dallas, Tex. (Age 26. Born Shawnee, Okla.) 1928 B. S. in C. E., Tex. Technological Coll. TT 4: P 4.—June 1928 to March 1929 Detaller, Truscon Steel Co., Youngstown, Ohio, detailing concrete and steel structures. TT 0.4: SP 0.4.—March to June 1929 Structural Engr., H. K. Ferguson Co., Cleveland, Ohio, on design and checking design of concrete structures and foundations. TT 0.2:

P 0.2: RC 0.2: D 0.2.—June 1929 to date Dist. Engr., The Texas Co., Dallas, Tex., in charge of construction equipment and maintenance for States of Oklahoma, New Mexico and Texas. **TT 2.2: P 2.2: RC 2.2.**—**TT 6.8: SP 0.4: P 6.4: RC 2.4: D 0.2.** Refers to O. V. Adams, O. W. Irwin, H. S. Jacoby, F. L. McRee, J. H. Murdough, H. N. Roberts.

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(12) **BJORNSTAD, BJARNE THORLEIF**, 104 North One Hundred First St., Seattle, Wash. (Age 23. Born Berger i Vestfold, Norway.) 1931 B. S. in C. E., Univ. of Wash. **TT 4: P 4.** Refers to G. E. Hawthorn, C. C. May, J. W. Miller, C. C. More, R. G. Tyler.

490

(12) **BLEVANS, JACK AUSTIN**, Joseph, Ore. (Age 25. Born Chicago, Ill.) 1931 B. S., Ore. State Coll. **TT 4: P 4.** Refers to J. R. Griffith, H. S. Rogers.

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(15) **BLISS, TULLA ETHAN**, 2228 Irwin Ave., Ft. Worth, Tex. (Age 47. Born Oskaloosa, Kans.) 1909 B. S., Kans. Univ. **TT 4: P 4.**—Aug. 1906 to Oct. 1908 and June to Aug. 1909 Chainman, Rodman and Draftsman, Atchison, Topeka & Santa Fe Ry. **TT 0.9: SP 0.9.**—Aug. 1909 to date with St. Louis San Francisco Ry., until Jan. 1914 as Rodman, Draftsman and Transitman; Jan. 1914 to Aug. 1918 Asst. Engr., at Chaffee, Mo., and Memphis, Tenn., on maintenance and in charge of party on construction of mine and other tracks, concrete work, etc.; Aug. 1918 to April 1919 Dist. Engr. at Birmingham, Ala., in charge of engineering work, under Federal control; April 1919 to March 1920 and Nov. 1920 to Oct. 1926 Asst. Engr. at Ft. Worth, Tex., in charge of maintenance-of-way engineering, after Nov. 1920 acted as Office Engr. in charge of engineering, some field work; March to Nov. 1920 and since Oct. 1926 Div. Engr. at Ft. Worth, in charge of engineering and maintenance of way, since 1926 also of M. of W. Dept. **TT 21.4: SP 0.3: P 21.1: RC 12.2: D 6.**—**TT 26.5: SP 1.2: P 25.3: RC 12.2: D 6.** Refers to J. H. Brillhart, J. H. Brookings, O. E. Carr, C. M. Davis, P. M. Geren, F. G. Jonah, D. L. Lewis, M. A. Stainer.

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(12) **BLOMGREN, ARTHUR CHARLES**, 1509 North Eighteenth St., Boise, Idaho. (Age 37. Born Denver, Colo.) Nov. 1914 to May 1917 Rodman and Instrumentman, U. S. Reclamation Service, Boise Project, Nampa Irrigation Dist., on topographic mapping, location and construction, irrigation and drainage work. **TT 1.3: SP 1.3.**—May 1917 to April 1929 with Idaho Bureau of Highways, until May 1919 as Field Draftsman on location, May 1919 to March 1920 Office Engr., Dist. 2 and 3, receiving reports and directing activities of locating parties and maintenance forces, checking construction reports and estimates, some highway location and construction, general office work, etc., March to Aug. 1920 Acting Dist. Engr., supervising maintenance of approx. 300 miles of state highway, and construction of approx. 57 miles in mountainous country, etc., and after Aug. 1920 Eng. Accountant in charge of Federal Aid procedure, approval of detailed estimates, cost analysis, project agreements and accounts, etc. **TT 10.8: SP 1: P 9.8: RC 9.**—April 1929 to date Director of Aeronautics, Dept. of Public Works, State of Idaho, on location, design and construction of aircraft landing facilities, inspecting and licensing aircraft, establishing minimum requirements for air-navigation facilities, survey and construction of intermediate landing fields, supervising aerial surveys, etc. **TT 2.3: P 2.3: RC 2.2: D 2.2.**—**TT 14.4: SP 2.3: P 12.1: RC 11.2: D 2.2.** Refers to J. L. Burkholder, G. N. Carter, J. P. Congdon, H. W. Gregory, J. A. Murphy, R. J. Newell, F. H. Pickett, W. G. Sloan, M. Swendsen, M. S. Wright.

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(10) **BOGART, JOHN ALLEYNE CALHOUN**, 326 Roper Ave., Gainesville, Fla. (Age 27. Born Savannah, Ga.) 1931 B. S. C. E., Univ. of Fla. **TT 4: P 4.**—Feb. to July 1925 Rodman and Instrumentman with T. Roy Young, Tampa, Fla., on real-estate development, street, lot, sewer line and sea-wall, surveying, etc. **TT 0.2: SP 0.2.**—**TT 4.2: SP 0.2: P 4.** Refers to C. C. Brown, P. L. Reed.

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(6) **BOMBERGER, LAWRENCE JOSEPH**, Box 266, Keyser, W. Va. (Age 24. Born Washington, D. C.) 1929 B. S., Univ. of Md. **TT 4: P 4.**—June 1929 to date with J. Paul Blundon, Cons. Engr., Keyser, W. Va., until July 1930 as Jun. Engr., acting as Rodman, Inspector and Asst. to Senior Engr., and since July 1930 Res. Engr., designing and investigating under supervision. **TT 1.5: SP 0.5: P 1.**—**TT 5.5: SP 0.5: P 5.** Refers to J. P. Blundon, A. N. Johnson, S. S. Steinberg.

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(4) **BOUTOURLINSKY, MICHAEL PETROVITCH**, 635 North Seventh St., Philadelphia, Pa. (Age 31. Born Saratov Dist., Russia.) 1929 B. S. in Civ. Eng., Robert Coll., Constantinople. Graduated from Real Gymnasium in Russia and Military Academy of Artillery, Petrograd. **TT 4: P 4.**—1929 to date post-graduate student in Civ. Eng., Univ. of Pennsylvania. **TT 4: P 4.** Refers to H. C. Berry, F. P. Witmer.

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(1) **BRADLEY, STEPHEN ROWE, Jr.**, North Broadway, Nyack, N. Y. (Age 25. Born Nyack, N. Y.) 1927 A. B., Princeton Univ., 1930 B. S., and 1931 C. E., Columbia Univ. TT 4: P 4. Refers to A. H. Beyer, J. K. Finch.

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(7) **BRAND, THEODORE**, Taylor, N. Dak. (Age 23. Born Taylor, N. Dak.) 1931 B. S., Sheffield Sci. School, Yale Univ. TT 4: P 4. Refers to C. T. Bishop, J. C. Tracy.

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(6) **BRASCHI, WALTER TORRES**, 623 North High St., Morgantown, W. Va. (Age 26. Born San Juan, Porto Rico.) 1930 B. S. in Eng. Electives, and 1931 B. S. C. E., W. Va. Univ. TT 4: P 4. Refers to L. V. Carpenter, R. P. Davis.

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(14) **BREWER, MONROE FRANK**, 5049 Page Blvd., St. Louis, Mo. (Age 22. Born St. Louis, Mo.) 1931 B. S., Washington Univ. TT 4: P 4.—Summers Rodman and Instrumentman with R. H. Buchmueller, Town Planning Engr., St. Louis, Mo., on subdivision work, including laying out streets, sewers, lots and sidewalks, also grading (1929) and Concrete Inspector, St. Louis Testing Laboratory, on concrete and cement inspection, testing concrete and steel, etc. (1930).—TT 4: P 4. Refers to E. O. Sweetser, J. L. Van Ornum.

500

(1) **BRIGGS, MILTON ALVER**, 1200 Main St., Bradley Beach, N. J. (Age 23. Born Asbury Park, N. J.) 1931 B. S. in Civ. Eng., Lehigh Univ. TT 4: P 4.—Summer 1929 Rodman, Turner Constr. Co. at Asbury Park, N. J.—June 1930 to Feb. 1931 (while student) with Pennsylvania Dept. of Highways, Div. 4, 5 months as Inspector on concrete road construction and 2 months Rodman on survey, etc.—TT 4: P 4. Refers to S. A. Becker, C. H. Sutherland, E. H. Uhler, W. L. Wilson.

501

(13) **BROWN, EDGAR ALLEN**, 1125 Cambridge Road, Burlingame, Cal. (Age 36. Born Los Angeles, Cal.) Aug. 1916 to May 1917 student, Univ. of Nevada. TT 0.5: P 0.5.—May 1917 to March 1918 and June 1919 to Feb. 1922 with State Engr.'s Office, Carson City, Nev., until March 1918 as Computer, Rodman, Chainman and Instrumentman on topographic and hydrographic work, and after June 1919 Hydrographer, Surveyor, Draftsman, Designer, and Examining Engr. on adjudication of water rights, also computing and compiling snow surveys. TT 3.1: SP 0.4: P 2.7: RC 1.3: D 0.2.—March 1918 to June 1919 with U. S. Army, A. E. F., 1st Army Artillery Park, C. A. C., Co. F. TT 0.6: SP 0.6.—Feb. 1922 to July 1929 Draftsman and Designer, until March 1924 with Yuba River Power Co., mapping and studying Yuba River drainage for power, drafting and designing on Bullards Bar power house, reinforced concrete detailing, and after March 1924 with Feather River Power Co., acting as Hydr. Computer, Draftsman and Structural Designer on Bucks Creek power development. TT 7.4: P 7.4: RC 3: D 2.3.—July to Dec. 1929 Hydrographer, Pacific Gas & Elec. Co., locally in charge of hydrography of Pit River plants, and of preparation of hydraulic data for court cases. TT 0.4: P 0.4: RC 0.4: D 0.4.—Dec. 1929 to Aug. 1930 Designing Draftsman, Public Works Eng. Corporation, structural design on Chenery filtration plant. TT 0.7: P 0.7: RC 0.7: D 0.7.—Aug. 1930 to Jan. 1931 Designer and Draftsman with August Kempkey, San Francisco, Cal., on design of Santiago Creek dam, study of effect on ground water of diversion and storage of Mokelumne River; Nov. 1930 also Structural Designer with Robert Kinzie, on design of three rock-fill and one concrete dam near Ketchikan, Alaska. TT 0.4: P 0.4: RC 0.4: D 0.4.—Feb. 1931 to date Designer and Constr. Engr., Trojan Eng. Corporation, San Francisco, on design and supervision of construction of pumping plants and water distribution systems. TT 0.5: P 0.5: RC 0.3: D 0.3.—TT 13.6: SP 1: P 12.6: RC 6.1: D 4.3. Refers to E. K. Barnum, L. R. Jorgensen, A. Kempkey, C. H. Lee, P. Schuyler, O. Speir, I. C. Steele.

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(8) **BROWN, FRANKLIN STEWART**, 574 Duane St., Glen Ellyn, Ill. Graduating student awarded Illinois Section prize. (Age 21. Born Chicago, Ill.) 1931 B. S., Univ. of Ill TT 4: P 4. Refers to J. J. Doland, W. C. Huntington.

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(12) **BROWN, HARLAN EUGENE, Jr.**, 1187 East Hoyt St., Portland, Ore. (Age 21. Born Portland, Ore.) 1931 B. S., Ore. State Coll. TT 4: P 4. Refers to J. R. Griffith, C. A. Mockmore, H. S. Rogers.

504

(9) **BROWN, RALPH CHARLES**, 25 East Third St., Newport, Ky. (Age 26. Born Harper, Kans.) 1930 C. E., Univ. of Cin. TT 4: P 4.—June 1929 to date Draftsman, Cincinnati Union Terminal Co., general design, drafting and preparing plans for construction of freight

and passenger terminal, also preparing track standards, frogs, switches, etc. *TT 2: P 2: D 0.5.—TT 6: P 6: D 0.5.* Refers to J. M. Belknap, J. C. Bussey, E. W. Clark, H. B. Luther, G. P. Stowitts.

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(8) **BROWN, VICTOR JACOB**, 118 West Blair St., West Chicago, Ill. (Age 37. Born South Omaha, Nebr.) 1925 B. S. in C. E., and 1930 C. E., Iowa State Coll. *TT 4: P 4.—*1917 to 1923 Asst. Engr. on road and bridges for Carroll (1917) and Lyon (1919) Counties, Iowa, Res. Engr., Currie Eng. Co., on concrete paving and storm sewer system, with sanitary and lead pipe water laterals (1919), Asst. Engr. on brick paving at Wayne, Nebr., and Res. Engr. on concrete paving at Neligh and Randolph, Nebr., and on storm sewer for Neligh (1920), for Rohrbough Eng. Co.; County Engr., Clarke County, Iowa, on design, construction and supervision of road and bridge work, under Board of Supervisors (March 1920 to March 1923). *TT 3: P 3: RC 3: D 3.—*Summer 1923 Inspector on steel bridge construction, Wabash Ry. Co., St. Louis, Mo.—June to Oct. 1925 Asst. Supt., Woodrich Constr. Co., Minneapolis, Minn., on construction of 27-ft. concrete highway (5½ miles). *TT 0.3: P 0.3.—*Oct. 1925 to April 1927 Field Engr., Parklap Eng. & Surveying Corporation of Florida, St. Petersburg, Fla., in charge of field engineering and construction of paving, sewers, water-works, drainage, subdividing, sea-wall, golf course, etc., including brick, concrete and asphalt paving, Dunedin Isles, Fla.; also Supt. for Frischkorn Florida Co., on storm sewers at Dunedin Isles, and designed the sewer system. *TT 1.7: P 1.7: RC 1.5.—*March to July 1927 Supt. with W. E. Boyce & Co., Contrs., Clearwater, Fla., as Supt. on construction of water-works for Gulfport, Fla. (1927) also Chf. Field Engr. on water system for Unit No. 1 and for 18-hole golf course, Dunedin Isles (1926 and 1927). *TT 0.4: P 0.4: RC 0.4.—*Aug. 1927 to date with Gillette Publishing Co., Technical Books and Periodicals, Chicago, Ill., as Mgr. of Book Dept., Editor on book revision and Associate Editor on periodicals. *TT 4: P 4: RC 4.—TT 13.4: P 13.4: RC 8.9: D 3.* Refers to T. R. Agg, J. E. Craig, R. W. Crum, A. H. Fuller, H. P. Gillette, W. B. Parsons, R. G. Ridgely.

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(2) **BUCK, ROBINSON DUDLEY**, 293 Oxford St., Hartford, Conn. (Age 22. Born Hartford, Conn.) 1931 B. S., Sheffield Sci. School, Yale Univ. *TT 4: P 4.* Refers to H. R. Buck, R. H. Suttle, J. C. Tracy.

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(13) **BURNETT, DOUGLAS HAROLD**, 3847 Twenty-first St., San Francisco, Cal., Graduating student awarded San Francisco Section prize. (Age 21. Born Ross, Cal.) 1931 B. S., Coll. of Eng., Univ. of Cal. *TT 4: P 4.—*Summers 1929 and 1930 Asst. to City Engr., Visalia, Cal., on sewage-disposal operation and research (under State Board of Health Engrs.) *—TT 4: P 4.* Refers to R. E. Davis, C. Derleth, Jr., F. S. Foote, C. G. Gillespie, C. G. Hyde.

508

(1) **BUTLER, ROBERT WHITE, Jr.**, 64 Livingston Ave., Yonkers, N. Y. (Age 26. Born New York City.) 1927 C. E., Cornell Univ. *TT 4: P 4.—*Oct. 1927 to Jan. 1928 student, training course, New York Telephone Co., reports on plant construction. *TT 0.1: SP 0.1.—*Jan. 1928 to Jan. 1931 with Whitman, Requaardt & Smith, Engrs., Baltimore, Md., until May 1928 as Transitman on surveys, etc.; May 1928 to Jan. 1929 Res. Engr. on construction of Basic Creek earth-fill dam near Albany; Jan. to July 1929 collecting data on underground structures (sewers, gas, water mains, etc.) for design of 48-in. supply conduit, Albany; July to Oct. 1929 Designer on reinforced concrete and structural steel building design; Oct. 1929 to Feb. 1930 Asst. Engr. on construction of 20 miles of 48-in. cast-iron supply conduit, Alcevo to Albany; Feb. to April 1930 Chf. of party on city survey and mapping for 30-in. branch line in Albany; April to May 1930 on tape measurements, collecting data and mapping for new connections to city distribution system at Albany; after May 1930 Asst. Engr. on construction of 100 000 000-gal. concrete-lined service reservoir at Loudonville, N. Y. *TT 2.5: SP 0.4: P 2.1: RC 1.8.—*Jan. to Feb. 1931 Engr. with J. D. Bell, Hillsdale, N. Y., being Chf. of party on survey and map for 600-acre game preserve. *TT 0.1: P 0.1: RC 0.1.—*Feb. to March 1931 Laborer, W. T. Byrne & Son, Contrs., Hartford, Conn., on sewer construction near White Plains, N. Y. *—TT 6.6: SP 0.5: P 6.1: RC 1.9.* Refers to F. A. Barnes, B. L. Smith.

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(1) **BUYS, CORNELIUS KOUWENHOVEN**, Voorhis Point, Nyack, N. Y. (Age 23. Born Brooklyn, N. Y.) 1931 B. S. in Civ. Eng., N. Y. Univ. *TT 4: P 4.—*Summers 1927, 1929 and 1930 Laborer, D. C. Weeks & Son, Inc., Bldrs., assisted on surveys, etc. (1927), Instrumentman and Estimator, Nieuwenhous Co., Inc., Bldrs., New York City, ran lines, set batter boards, tunnel lines, etc., estimated quantities, checked equipment, etc. (1929) and Instrumentman, Walter Kidde Co., New York City, road layouts, traverses, cross-sections, profiles,

map making, etc. (1930).—Aug. 1928 to Feb. 1929 Timekeeper and Material Clerk, John Lowry, Inc., Bldrs., New York City, in charge of job office in absence of Supt., reports, cost accounting, surveys, etc. TT 0.3: SP 0.3.—TT 4.3: SP 0.3: P 4. Refers to E. G. Hooper, C. T. Schwarze.

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(1) CAIOLA, FRED, 2840 Wellman Ave., New York City. (Age 40. Born San Fratello, Italy.) 1917 B. S. in C. E., Cooper Union. TT 4: P 4.—May 1917 to March 1918 Transittman with Wm. M. Ballard, Gen. Contr., Syracuse, N. Y., laying out work, inspecting and assisting Constr. Supt. on construction of engine terminal at Belle Isle for New York Central R. R., including round house, machine shop, dormitory and about five miles of leads and yard tracks. TT 0.5: SP 0.5.—March 1918 to Feb. 1919 Reinforced Concrete Designer, J. G. White Eng. Corporation, New York City, on plans for Nitrate Plant No. 2 and Matagorda Development. TT 0.9: P 0.9.—Feb. 1919 to Sept. 1923 with De Angelo Bldg. Corporation, Oneonta, N. Y., until April 1921 Estimator and generally assisting in office and field, then Supt. on construction of Kalo Battery Factory, St. James Episcopal Church, Wilber Park Shelter House and Walkings Ave. Garage, all in Oneonta. TT 3.5: SP 1.1: P 2.4: RC 2.4.—Sept. 1923 to Aug. 1925 Topographical Draftsman, Borough of Queens (Highway), New York City, preparing plans from Surveyor's notes for regulating, curbing, flagging and paving city streets. TT 1: SP 1.—Aug. 1925 to date Mgr., New York Cut Cast Stone Corporation, New York City, gathering data on technique of concrete, on design and control of mixtures, selecting materials and conducting tests; advising architects and builders in volume saving, jointing, anchoring, supporting, etc.; directing Chf. Draftsman on decided changes in sections, checkings, reinforcement, etc., visiting jobs, closing contracts, buying materials and tour to observing old jobs for changes by atmosphere. TT 6: P 6: RC 3.9.—TT 15.9: SP 2.6: P 13.3: RC 6.3. Refers to C. F. Giraud, A. K. Johnson, A. Levin, S. F. Sammarco, M. Spiro.

511

(13) CAMP, FRED ALBERT, 2229 Clement St., San Francisco, Cal. (Age 26. Born in Austria.) 1931 B. S., Univ. of Cal. TT 4: P 4.—Dec. 1921 to Jan. 1923 Rodman, Chainman and Constr. Laborer, Bates & Rogers Constr. Camp, Las Banos, Cal. TT 0.4: SP 0.4.—April to July 1927 Foreman, Guerin Bros. Constr. Camp, Gloat, in charge of reinforcing steel distribution and placement. TT 0.2: SP 0.2.—July to Dec. 1927 Rodman, Chainman and Jun. Office Aid, U. S. Bureau of Public Roads, San Francisco, Cal. TT 0.2: SP 0.2.—May 1928 to Aug. 1930 with Hetch Hetchy Water Supply (City of San Francisco), until Aug. 1928 as Rodman, Chainman, Levelman and Jun. Office Aid, May to Aug. 1929 Asst. Res. Engr., in charge of engineering work in construction camp (tunnel construction) and after Dec. 1929 Surveyor's Field Asst. and Jun. Office Aid in Livermore.—TT 4.8: SP 0.8: P 4. Refers to R. E. Davis, C. Derleth, Jr., N. A. Eckart, J. B. Leonard, L. T. McAfee, C. R. Rankin.

512

(8) CAMPBELL, DUNCAN McVOY, 221 North LaSalle St., Chicago, Ill. (Age 36. Born Chicago, Ill.) 1917 B. S. in C. E., Univ. of Ill. TT 4: P 4.—June 1917 to date (except Aug. 1917 to Jan. 1919 2d Lieut., Coast Artillery Corps, U. S. Army, 1 year with A. E. F. in France) with Cook County (Ill.) Highway Dept., until Aug. 1917 and Feb. 1919—Dec. 1920 Inspector-Engr., on preliminary surveys, laying out field work, preparing drawings, inspecting construction and materials; Jan. 1921 to Sept. 1925 Jun. Civ. Engr., designing, examining plans and specifications, preparing drawings, directing field party on surveys, construction or repair of engineering and landscape projects; Sept. 1925 to June 1926 Asst. Civ. Engr., on plans and specifications for construction or repair of highway structures, direct supervision on construction, assisting on plans and specifications for road construction and repair; June 1926—Feb. 1927 Superv. Engr., in responsible charge of directing and advising Township Highway Comms. as to repair, maintenance and improvement of highways and bridges; March 1927 to Dec. 1929 Office Engr., in responsible charge of field surveys, highway location, assembling data, plans, specifications and estimates for highway contracts; also Acting Constr. Engr. (Jan. to May 1929); since Dec. 1929 Asst. County Highway Engr., having general supervision of all work of Highway Dept., including acting as Deputy County Supt. of Highways (in absence of Supt.), supervising location, design, plans and construction and maintenance of highway work. TT 12: SP 1.9: P 10.1: RC 5: D 5.—TT 16: SP 1.9: P 14.1: RC 5: D 5. Refers to D. J. Brumley, J. B. Hittell, D. I. Okes, G. A. Quinlan, F. T. Sheets, E. C. Wenger, C. C. Wiley.

513

(12) CAMPBELL, MAXWELTAN SELWYN, Twenty-sixth and Van Buren Sts., Corvallis, Ore. (Age 24. Born Bellingham, Wash.) 1931 B. S. in C. E., Ore. State Coll. TT 4: P 4. Refers to J. R. Griffith, H. S. Rogers.

514

(16) **CAMPBELL, MORGAN SKILES**, Care, National Park Service, Estes Park, Colo. (Age 22. Born Ft. Worth, Tex.) 1931 B. S. in C. E., Rice Inst. TT 4: P 4.—Oct. 1926 to June 1927 Helper to Layoutman in structural steel fabricating shop, North Texas Iron & Steel Co. of Ft. Worth, Tex. TT 0.3: SP 0.3.—At present with National Park Service, Estes Park, Colo.—TT 4.3: SP 0.3: P 4. Refers to R. J. Cummins, L. B. Ryon, Jr., W. E. White.

515

(7) **CAREY, CLYDE CARLTON**, 4916 Upton Ave. South, Minneapolis, Minn. (Age 40. Born Ada, Ohio.) 1911 C. E., Ohio Northern Univ. TT 4: P 4.—Jan. to June 1912 Draftsman and Checker, Marion (Ohio) Steam Shovel Co. TT 0.1: SP 0.1.—June 1912 to June 1920 (at intervals) with U. S. Reclamation Service, until Dec. 1915 as Rodman, Chainman, Levelman, Transitman, Planetableman, Computer, Chf. of Party on reconnaissance, location and construction, Inspector and Office Engr. on water-right adjudications, Office Engr. on construction and Designer of canals, lateral systems and timber and reinforced concrete structures; May to Oct. 1918 Supt. of Constr. on concrete control works and concrete-lined canals; June to Nov. 1919 Chf. of Party locating lateral system for irrigation; May to June 1920 Supt. of Constr., repairing break in main canal. TT 3.7: SP 1: P 2.7: RC 2.3: D 0.4.—July 1920 to July 1921 and May 1922 to June 1923 with Bynum (Mont.) Irrigation Dist. as Designing Engr. in charge of design and plans for an irrigation system (about 20 000 acres) and after May 1922 on water-supply studies and Designer of irrigation structures, Irrigation Dist. TT 2: P 2: RC 1: D 1.—June to Dec. 1923 with B. A. Z. Irrigation Dist., Chinook, Mont., in charge of construction of irrigation project (\$280 000), location of canal system, inspection, instructions to contractor, computations, estimates, etc. TT 0.5: P 0.5: RC 0.5.—Jan. 1923 to date with Winston Bros Co., Gen. Contrs., Minneapolis, Minn., as Supt. of Constr. on railroads, highways, bridges, dams, power plants, tunnels, etc. TT 7.5: P 7.5: RC 7.5.—TT 17.7: SP 1: P 16.7: RC 11.3: D 1.4. Refers to J. H. Caton, 3d, P. M. Churchill, G. H. Ellis, R. H. Fifield, F. T. Hillman, L. S. Oakes, F. Towle.

516

(2) **CARGILL, DANIEL OLNEY**, R. D. No. 2, Box 96, Valley Falls, R. I. (Age 32. Born Cumberland, R. I.) 1919 B. S., Rhode Island State Coll. TT 4: P 4.—Sept. 1919 to July 1923 with E. Worthington, Cons. Engr., as Transitman, Computer, Draftsman, Chf. of Party and Inspector, on highway and sewer construction, etc. TT 2: SP 2.—July 1923 to date with State of Rhode Island, as follows: July to Oct. 1923 and March 1924 to May 1925 with Bridge Dept., Rhode Island State Board of Public Roads, as Chf. of Party on surveys, Inspector, Designer and Res. Engr., on highway bridge construction; Oct. 1923 to March 1924 Chf. of Party on project investigation surveys, Draftsman, Chf. Draftsman and Designer, Washington Bridge Comm.; May 1925 to Feb. 1926 Office Engr. in charge of computation and design (6 months) and Chf. Engr., Mount Hope Toll Bridge Comm., May 1925 to Feb. 1926 (part of time) also Acting Bridge Engr., and since Feb. 1926 Bridge Engr., Rhode Island State Board of Public Roads, in charge of design, construction and maintenance of highway bridges; since May 1927 also with Washington Bridge Comm., as Technical Advisor during preliminary proceedings and in co-operation with Engineer during construction. TT 7.7: SP 0.2: P 7.5: RC 6.4: D 6.8.—TT 13.7: SP 2.2: P 11.5: RC 6.4: D 6.8. Refers to W. G. Brenneke, C. H. Dutton, A. G. Hayden, G. H. Henderson, C. W. Hudson, D. B. Steinman, F. C. Williams.

517

(12) **CARLSON, ALDEN CARL**, 4126 Second Ave. N. W., Seattle, Wash. (Age 22. Born Seattle, Wash.) 1931 B. S. in C. E., Univ. of Wash. TT 4: P 4.—Summers 1929 and 1930 Rodman, Chainman, Axeman and Transitman with County Engr., King County, on highway location and construction.—TT 4: P 4. Refers to G. E. Hawthorn, T. D. Hunt, C. C. May, J. W. Miller, C. C. More, R. G. Tyler.

518

(1) **CARPENTER, CHARLES HAROLD**, 538 Westchester Ave., Port Chester, N. Y. (Age 21. Born New York City.) 1931 B. S., Sheffield Sci. School, Yale Univ. TT 4: P 4. Refers to C. T. Bishop, J. C. Tracy.

519

(12) **CARSON, VERNER EUGENE**, 372 Iowa St., Ashland, Ore. (Age 26. Born Morrison, Okla.) 1931 B. S. in Civ. Eng., Ore. State Coll. TT 4: P 4.—1929 to 1930 Rodman, Southern Pacific Co. TT 0.5: SP 0.5.—TT 4.5: SP 0.5: P 4. Refers to J. R. Griffith, H. S. Rogers.

520

(16) **CASS, RILEY TOWNE**, 1206 Euclid, Boulder, Colo. (Age 21. Born Colorado Springs, Colo.) 1931 B. S. in C. E., Univ. of Colo. TT 4: P 4. Refers to R. L. Downing, C. L. Eckel, E. W. Raeder.

521

(9) CAWOOD, KEITH CREWS, 147 Eighth St., Brookville, Ind. (Age 25. Born Palestine, Ill.) 1928 B. S., Ill. Wesleyan Univ. 1931 B. S. C. E., Purdue Univ. TT 4: P 4.—June 1928 to Sept. 1929 Jun. Engr., Illinois State Highway Dept., on construction, mostly inspecting; 5 months in office on plans, right-of-way plats, strip maps, etc. TT 0.6: SP 0.6.—TT 4.6: SP 0.6: P 4. Refers to S. C. Hollister, G. P. Springer.

522

(14) CHANDLER, JAMES FREDERICK, U. S. Engr. Office, Paducah, Ky. (Age 29. Born Birdsville, Ky.) 1931 B. S., Univ. of Ill. TT 4: P 4.—Feb. 1925 to Sept. 1927 and summers, 1928-1930 Surveyman, Inspector, Instrumentman and Draftsman, with U. S. Eng. Dept., Dam No. 51, Ohio River, Golconda, Ill. TT 1.3: SP 1.3.—TT 5.3: SP 1.3: P 4. Refers to J. J. Doland, W. C. Huntington, W. A. Oliver, J. Vawter.

523

(3) CHAPE, BRUNO, 7 Miles St., Binghamton, N. Y. (Age 22. Born Binghamton, N. Y.) 1931 C. E., Cornell Univ. TT 4: P 4. Refers to F. A. Barnes, J. E. Perry.

524

(8) CHASTAIN, WILLIAM EMMITT, 2145 North Main St., Decatur, Ill. (Age 21. Born in Wayne County, Ill.) 1931 B. S. C. E., Univ. of Ill. TT 4: P 4. Refers to H. E. Babbitt, J. J. Doland, W. C. Huntington, T. C. Shedd.

525

(1) CHEMIDLIN, JOHN PRINCE, 61 Lawton Ave., Hartsdale, N. Y. (Age 27. Born Mexico City, Mexico.) 1926 B. S. in C. E., Manhattan Coll. TT 4: P 4.—Sept. 1927 to date Asst. Engr., Westchester County San. Comm., in charge of sewer repair (1 year) and construction (1½ years) and Chf. of Party on preliminary survey work for sewers (1½ years). TT 5.8: P 3.8: RC 1.3.—TT 7.8: P 7.8: RC 1.3. Refers to C. J. Suhr, J. Wilnot, F. C. Zeigler.

526

(15) CHENET, THEODORE THIBODAUX, Winnsboro, La. (Age 32. Born Lafourche, La.) June 1919 to Oct. 1920 Instrumentman, Board of Port Comms., New Orleans, La., giving line and grade for construction of locks, a wharf and railroad tracks. TT 0.5: SP 0.5.—June 1921 to March 1922 Surveyman, U. S. Engr. Dept., South West Pass., Mississippi River, hydrographic work, construction of jetties, triangulation, computation of yardage and drafting. TT 0.7: P 0.7: RC 0.7.—March 1924 to May 1925 Res. Engr., Arkansas Highway Comm., Batesville, Ark., on construction of gravel highway, with bridges and drainage structures, classification of rock, loose rock and earth. TT 1.2: P 1.2: RC 1.2.—June 1925 to Nov. 1927 Res. Engr., Hotard Eng. Co., Inc., New Smyrna, Fla., on construction of brick and concrete pavements, storm and sanitary sewers and water-works system. TT 2.4: P 2.4: RC 2.4: D 1.—May 1928 to Nov. 1930 Res. Engr., Payne Eng. Co., Gretna, La., on highway location, street paving (concrete), storm sewers, drainage and surveys. TT 2.5: P 2.5: RC 2.5: D 1.—May 1922 to March 1924 Instrumentman on location, soil sampling and drafting, Dec. 1927 to April 1928 Draftsman and Locating Engr., and Feb. 1931 to date Res. Engr. on concrete paving, trestles and small drainage structures, all for Louisiana Highway Comm., Baton Rouge, La. TT 1.6: SP 0.8: P 0.8: RC 0.6: D 0.2.—TT 8.9: SP 1.3: P 7.6: RC 7.4: D 2.2. Refers to A. Berea, Jr., D. B. Cutler, R. H. Mann, M. Nicholson, J. H. Randolph, Jr.

527

(13) CHERNO, JOHN, 1662 Broadway, San Francisco, Cal. (Age 32. Born Gams, Switzerland.) 1921 C. E., Swiss Fed. Pol. Inst., Zurich, Switzerland. TT 4: P 4.—Aug. 1921 to June 1924 Designer with M. Schnyder, Burgdorf, Switzerland, on reinforced-concrete bridges, foundations, tanks, buildings, etc. TT 2.9: P 2.9: RC 2: D 2.9.—July 1924 to April 1925 Draftsman, Republic Fireproofing Co., Inc., New York City, on buildings. TT 0.7: P 0.7: D 0.1.—April 1925 to April 1929 Designer, Mees & Mees, Inc., Charlotte, N. C., on dams, power and filtration plants, bridges and buildings. TT 4: P 4: RC 2: D 4.—April 1929 to June 1930 Draftsman, Pacific Gas & Elec. Co., San Francisco, Cal., on transmission-line towers. TT 1.1: P 1.1: D 0.5.—June 1930 to April 1931 Tidal Mathematician, U. S. Engr. Dept., San Francisco, on tide studies and hydraulic-model testing. TT 0.8: P 0.8: RC 0.8.—April 1931 to date Designer with H. B. Hammill, San Francisco, on structural engineering. TT 0.2: P 0.2: RC 0.2: D 0.2.—TT 13.7: P 13.7: RC 5: D 7.7. Refers to H. G. Gerdes, J. J. Gould, H. B. Hammill, C. A. Mees, M. P. O'Brien.

528

(15) CLARK, FRANK MERITT, 1915 Tenth St., Lubbock, Tex. (Age 21. Born Eldorado, Okla.) 1931 B. S. in Civ. Eng., Tex. Technological Coll. TT 4: P 4. Refers to O. V. Adams, F. L. McRee, J. H. Murdough.

529

(3) **CLAUS, WILLIAM GEORGE**, 824 DeCamp Ave., Schenectady, N. Y. (Age 25. Born Schenectady, N. Y.) 1931 B. S. in Civ. Eng., Univ. of Ala. TT 4: P 4. Refers to J. G. Allen, J. A. C. Callan, G. J. Davis, Jr., A. C. Decker, D. C. A. du Plantier, H. H. Houk, S. C. Houser.

530

(12) **CLEMONS, EDWARD WILLIAM SMITH**, 4546 Eighteenth Ave., N. E., Seattle, Wash. (Age 24. Born Olympia, Wash.) 1931 B. S. in C. E., Univ. of Wash. TT 4: P 4. Refers to I. L. Collier, C. C. May, J. W. Miller, C. C. More, R. G. Tyler.

531

(3) **CLINTSMAN, JOSEPH ORVILLE**, 512 Alexandria St., Carthage, N. Y. (Age 23. Born South Russell, N. Y.) 1931 B. S. in Civ. Eng., Clarkson Coll. Tech. TT 4: P 4.—Summer 1930 and June 1931 to date Jun. Asst. Engr., Grade 1 (Field), Div. of Highways, New York State Dept. of Public Works, Acting as Inspector.—TT 4: P 4. Refers to W. H. Allison, W. J. Farrisee, F. C. Wilson.

532

(4) **CLOSE, ROSS ARTHUR**, 60 West Ave., Wellsboro, Pa. (Age 23. Born Kenneville, Pa.) 1931 B. S. in Arch. Eng., Pa. State Coll. TT 4: P 4. Refers to C. L. Harris, R. L. Sackett.

533

(13) **COHEN, HARRY AARON**, 1267 Forty-sixth Ave., San Francisco, Cal. (Age 23. Born San Francisco, Cal.) 1931 B. S. in Eng., Univ. of Cal. TT 4: P 4. Refers to C. Derleth, Jr., J. H. Hjul.

534

(13) **COLBY, WALDO**, 1622 Clinton Ave., Alameda, Cal. (Age 39. Born Oakland, Cal.) 1913 to 1915 Asst. Engr. on location for California Highway Comm. and Asst. Supt. of construction, for J. A. Marshall, Contr., Berkeley, Cal., on 27 miles of highway, Los Gatos to Santa Cruz. TT 2: P 2: RC 1.—1916 Asst. to J. A. Marshall, Contr., on paving contract, Belmont, Cal. TT 1: P 1: RC 1.—1917 to 1919 with U. S. Army as Private, 1st Class, Co. B, 18th Engrs. Ry., A. E. F., on St. Sulpice and Algrifville projects. TT 2: P 2: RC 2: D 2.—1919 with Associated Oil Co., Avon, Cal., on construction of cracking and lubricating plants. TT 1: P 1.—1920 to 1922 Asst. Engr., U. S. Reclamation Service, Umatilla and Yakima Projects, survey, design, etc. TT 2: P 2: RC 2: D 2.—1922 to 1924 Senior Draftsman, East Bay Water Co., Oakland, Cal., Niles Delta, underground water supply and electrolysis investigations. TT 2: P 2.—March-Aug. 1924 Supt., Buena Vista Lake Reservoir Association, Miller and Lux, Kern County Land Co., Bakersfield, Cal., in charge of Kern River under Miller and Haggin agreement, invented discharge curve for rivers with sifting sands. TT 0.5: P 0.5: RC 0.5.—1925 to 1927 Asst. Engr., McCloud (Cal.) River Lumber Co., map of town, dam and 7-mile pipe line, raised McCloud R. R. to avoid Mud Creek flow. TT 2: P 2: RC 2.—1927 to date working on self recording water meter and private inventive work on Diesel engines. TT 4: P 4: D 4.—Special investigations, Red River Lumber Co., Westwood, Cal., Nortropoc Cabarrus Co., Guatemala, Crescent Mining Co., Oatman, Ariz., East Bay Utility Dist., Oakland, Cal., Standard Oil Co. and Union Diesel Engine Co. TT 16.5: P 16.5: RC 6.5: D 8. Refers to A. P. Davis, W. C. Hammatt, F. C. Herrmann, E. Hyatt, J. L. Lytel.

535

(16) **COLEMAN, MacKAY**, LaTour, Mo. (Age 26. Born LaTour, Mo.) 1931 B. S. in C. E., Univ. of Ariz. TT 4: P 4. Refers to F. C. Kelton, J. C. Park.

536

(1) **CONNER, HARRY MCKEAN**, 151 Lincoln St., Astoria, N. Y. (Age 24. Born Oakfield, N. Y.) Took courses in Structural Mechanics (Sept. 1929 to May 1930) and in Plain and Reinforced Concrete Construction (Sept. 1930 to date), Columbia Univ.—March 1925 to Sept. 1927 Foresight, The Hudson Coal Co., on surveys, computing earthwork excavation quantities, power line construction, some instrument and note work in field and mine, etc. TT 1.3: SP 1.3.—Sept. 1927 to May 1928 Asst. Field Engr., The U. G. I. Contr. Co., Philadelphia, Pa., practically in charge of surveying on large industrial building, and in charge measuring and estimating earth excavation. TT 0.5: SP 0.2: P 0.3: RC 0.3.—June 1928 to July 1929 Asst. Engr. with W. W. Young, Cons. Engr., supervising repair of small sewer system, estimating quantities, etc.; Asst. Engr., West County San. Sewer Comm., in charge of field party, office work on surveying and mapping designing and writing specifications for sewage plant. TT 1.1: P 1.1: RC 0.6: D 0.5.—July 1929 to date Transitman, Board of Water Supply, New York City, until Sept. 1930 acting as Rodman on instrument work, also estimating and drafting, since Sept. 1930 in charge of field party on tunnel construction, estimating and draft-

ing and some work as Inspector on tunnel construction. *TT 1.2: SP 0.6: P 0.6: RC 0.6.—TT 4.1: SP 2.1: P 2: RC 1.5: D 0.5.* Refers to D. M. Burmister, J. K. Finch, W. D. Kramer, B. Marcus, D. J. Shaw, G. A. Sherron, F. C. Zeigler.

537

(13) COON, EMMETT JOHN, Box 346, Sacramento, Cal. (Age 27. Born Osseo, Wis.) 1930 B. S. in C. E., Mont. State Coll. *TT 4: D 4.*—July-Sept. 1923, April-Dec. 1924, May-July 1925 and March 1928 to March 1929 with R. H. Fifield, Cons. Engr., Billings, Mont., as Rodman, Levelman and Topographer, part of time in charge of earth work (drainage canals) and of classification party on planetable survey of irrigable land (9 000 acres). *TT 1.4: SP 0.9: P 0.5.*—July 1930 to date Jun. Topographic Engr., U. S. Geological Survey, stadia work, topography, etc., also (since Nov. 1930) recording for three wire prism level party. *TT 0.3: SP 0.3.—TT 5.7: SP 1.2: P 4.5.* Refers to R. H. Fifield, E. L. Grant.

538

(13) COONS, ALFRED DEVORE, University Farm, Davis, Cal. (Age 24. Born Palo Alto, Cal.) 1930 B. S., Univ. of Cal. *TT 4: P 4.*—June to Dec. 1930 Field Clerk and Timekeeper, Pacific Gas & Elec. Co., in charge of engineering work for installation of gas distribution systems in cities, Timekeeper and Material Clerk. *TT 0.5: P 0.5: RC 0.5.*—Jan. 1931 to date Res. Engr., Univ. of California, Branch College of Agriculture, Davis, Cal., surveying, keeping maps and records, drafting, design. *TT 0.4: P 0.4: RC 0.4: D 0.4.—TT 4.9: P 4.9: RC 0.9: D 0.4.* Refers to C. Derleth, Jr., J. C. Foss, Jr., H. B. Walker.

539

(14) COWEN, CHESTER MELCENIA, 416 Minnesota Ave., Chickasha, Okla. (Age 23. Born Chickasha, Okla.) 1931 B. S. C. E., Univ. of Ariz. *TT 4: P 4.* Refers to E. S. Borgquist, F. C. Kelton, J. C. Park.

540

(1) CREASY, DONALD CRAMPTON, 1281 Madison Ave., New York City. (Age 20. Born New York City.) 1931 C. E., Cornell Univ. *TT 4: P 4.* Refers to F. A. Barnes, J. E. Perry.

541

(10) CROMER, ORLAND DWIGHT, 1106 Elmwood Ave., Columbia, S. C. (Age 21. Born Columbia, S. C.) 1931 B. S. in C. E., Univ. of S. C. *TT 4: P 4.* Refers to R. C. Johnson, W. E. Rowe.

542

(7) CURTIS, IRA NANKERVIS, 2112 East Park Place, Milwaukee, Wis. (Age 22. Born Chicago, Ill.) 1931 B. S. in C. E., Univ. of Mich. *TT 4: P 4.*—Feb. 1926 to Sept. 1927 Arch. Draftsman and Tracer, until May 1927 with Lyman J. Allison, Archt., then with Howard Shaw Assoc., both of Chicago. *TT 0.6: SP 0.6.*—Summers 1928 and 1929 Material Clerk, Asst. Timekeeper and Laborer, Wells Bros. Constr. Co., Chicago, Ill., checking material, etc.—July 1930 to June 1931 Student Asst., Civ. Eng. Dept., Univ. of Michigan, research work on broad-crested weirs, etc.—June 1931 to date Inspector, U. S. Engr. Office, Milwaukee, Wis. platting contour maps of drainage areas, Draftsman on piers, breakwater, etc. *TT 0.1: SP 0.1.—TT 4.7: SP 0.7: P 4.* Refers to J. H. Cissel, W. C. Hoad, H. W. King, C. O. Wisler, J. S. Worley.

543

(11) DAIL, WILLIAM ELTON, 2015 Hawthorne St., Tucson, Ariz. (Age 21. Born Enid, Okla.) 1931 B. S. C. E., Univ. of Ariz. *TT 4: P 4.* Refers to E. S. Borgquist, F. C. Kelton, J. C. Park.

544

(14) DAMOTTE, EARL KENNETH, 2307 Illinois Ave., Granite City, Ill. (Age 21. Born Granite City, Ill.) 1931 B. S. in C. E., Mo. School of Mines. *TT 4: P 4.*—Summer 1930 Jun. Highway Engr. and Inspector, Illinois State Highway Dept., Div. 6.—*TT 4: P 4.* Refers to C. E. Bardsley, H. C. Beckman, J. B. Butler, E. G. Harris, C. V. Mann.

545

(14) DAVIS, EDWARD MCCOLLOUGH, 108 Pearl St., Little Rock, Ark. (Age 32. Born Newberry, S. C.) 1922 C. E., Ga. School Tech. *TT 4: P 4.*—June 1922 to July 1923 Timekeeper, Fisk-Carter Constr. Co., Greenville, S. C., checking time and materials, giving levels and lines for buildings. *TT 0.6: SP 0.6.*—July 1923 to July 1924 Instrumentman with Mees & Mees, Engrs., Charlotte, N. C., on surveys. *TT 0.5: SP 0.5.*—July 1924 to July 1925 Asst. Engr., Lockwood-Green Co., Atlanta, Ga., field work on streets, sewers, water-works and houses. *TT 0.5: SP 0.5.*—July 1925 to date Engr., successively with Hickman-Davis Realty Co., Miami, Fla., on design and building of streets, water-works and sewerage and Harrison County Highway Dept., Gulfport, Miss., and Arkansas Highway Dept., Little Rock, Ark., on design and building of highways. *TT 6: P 6: RC 6: D 6.—TT 11.6: SP 1.6: P 10: RC 6: D 6.* Refers to S. A. Brady, C. S. Christian, C. S. Constant, A. C. Galt, A. E. Heagler, L. J. N. Kellher, R. D. Likins, W. W. Zass.

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(13) DAVIS, KENNETH HOWE, 144 Townsend St., San Francisco, Cal. (Age 32. Born Buffalo, N. Y.) Registered Civ. Engr., State of Arizona.—1916 Structural Engr., Buffalo Tech.—1919 special subjects, Carnegie Inst. of Technology.—1916 Draftsman, Ferguson Steel & Iron Co., Buffalo, N. Y., on structural steel detail. *TT 0.2: SP 0.2.*—1917 to 1918 2d Lieut., U. S. Army, A. E. F., France, railroad construction, maintenance and survey. *TT 0.7: SP 0.7.*—1919 Transitman and Asst. to Res. Engr., Leonard Eng. Co., Chicago, Ill., on Coffeyville (Kans.) Plant of Sinclair Oil Co. *TT 0.3: SP 0.3.*—1919 to 1920 Maintenance Engr., Atchison, Topeka and Santa Fe R. R. Coast Lines, Needles (Cal.) Div. *TT 0.4: P 0.4.*—1920 to 1921 with L. H. Foster, U. S. Mineral Surveyor, Kinoman, Ariz., as Transitman, Draftsman and Chf. of Party. *TT 1.6: P 1.6: RC 1.6.*—1921 to 1923 and 1925 to 1927 in private practice as Engr. on surveys, surface and underground mill and smelter design and construction in Kingman, Oatman and White Hills, Ariz., and Jimtown, Cal. *TT 3.8: P 3.8: RC 3.8: D 3.8.*—1924 to 1925 with Mohave County Road Dept., on highway location, Coyote Pass Road, Kingman to Chloride, Ariz., survey. *TT 0.6: P 0.6: RC 0.6: D 0.6.*—1927 to date with Wickwire Spencer Steel Co., Pacific Coast Dist., San Francisco, Cal., as Asst. Chf. Engr. and since Jan. 1931 Chf. Engr., on application of design of Clinton welded fabric to reinforced concrete roads, slabs, piles, ties, concrete pipe, for fire proofing steel frame buildings, as temperature and basic reinforcement for cement gun work, ditches, canals, reservoirs and pipes, to standardization of materials and practices in manufacture and application of wire rope for oil and logging industries; design of wire conveyor belts for temperature furnaces and chemical conditions. *TT 3.6: P 3.6: RC 3.6: D 3.6.*—*TT 11.2: SP 1: P 10.2: RC 9.6: D 8.* Refers to G. F. Carney, C. H. Field, E. F. Halloran, C. M. Jenkins, C. T. Keefer.

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(5) DAVIS, ROBERT OLIN, U. S. Geological Survey, Washington, D. C. (Age 24. Born Leesburg, Ohio.) 1930 B. C. E., Ohio State Univ. *TT 4: P 4.*—June 1930 to date Jun. Engr., U. S. Geological Survey, on topographic mapping. *TT 1: P 1.*—*TT 5: P 5.* Refers to C. T. Morris, C. E. Sherman.

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(5) DAWSON, JOHN ROBERT, Route 3, Box 293, Hampton, Va. (Age 22. Born Monroe City, Mo.) 1929 B. S. in C. E., Rice Inst. *TT 4: P 4.*—June 1929 to April 1930 Instrumentman, Humble Oil & Refining Co., on surveys, etc. *TT 0.4: SP 0.4.*—April 1930 to date Jun. Structural Engr., National Advisory Comm. for Aeronautics, inspecting construction; at present on research work on seaplane floats, Seaplane Towing Channel. *TT 1.3: P 1.3.*—*TT 5.7: SP 0.4: P 5.3.* Refers to L. B. Ryon, Jr., S. Truscott.

549

(1) DEAN, ARTHUR CRESWELL, 1 North Parade, Manchester, England. (Age 42. Born Manchester, England.) 1908 B. Sc., and M. Sc., Victoria Univ. of Manchester. *TT 4: P 4.*—1908 to date (except Sept. 1914 to March 1919 with Royal Engrs., in France, demobilized as Capt.), with C. S. Allott & Son, Manchester, England, until 1914 as Asst. Engr. on surveys, levels, drawings, quantities, superintendence, etc., for foundations for turbo generator and boilers, chimney (250 ft. high); pump house, concrete tanks and boiler houses (£21 000) for Manchester Elec. Dept., alterations to buildings, turbo foundations, etc. (£2 200), for Salford Elec. Dept., renewals and strengthening for Palatine Bridge, Salford Corporation (£7 000), new cotton mills (£27 200) for Rio Flour Mills & Granaries, Ltd., etc., and Res. Engr. on site for London South Western Ry. electrification, Wimbledon power station and five substations (£100 000); March 1919 to June 1927 Chf. Asst. on alterations, tanks for cooling towers and additional foundations for turbo generator and boilers and widening of coal viaduct and bridge at Stuart St. generating station (about £25 000), buildings, roads, railways, bridges and aqueducts (about £720 000) for Barton power station and a 33 000-volt outdoor substation (about £13 000), all for the Manchester Corporation, Agceroft power station, cotton mills in Rio de Janeiro, road and railway bridges, substations for S. E. Ry. electrification, etc. (total about £1 500 000); since June 1927 member of firm (since 1929 sole partner), on similar works principally, steel frame boiler house, turbine and switch houses, river jetty, water-works, bridges, etc., for Battersea power station (£1 300 000), land and river works, Manchester Elec. Dept. extensions, steel frame buildings, foundations, etc. (list of works forwarded with application). *TT 22: SP 1.3: P 20.7: RC 18.2: D 12.5.*—*TT 26: SP 1.3: P 24.7: RC 18.2: D 12.5.* Refers to S. G. Hay, J. A. Orrell. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(15) DEAN, WILLIAM ENNELS, Jr., Box 545, Opelousas, La. (Age 21. Born Monticello, Fla.) 1931 B. S. C. E., Univ. of Fla. *TT 4: P 4.*—Jan. to April 1926 Rodman and Chainman, Atlantic Coast Line R. R. Co. *TT 0.1: SP 0.1.*—April to Oct. 1926 Rodman, Levelman,

Tracer and Draftsman, Road Dept., Jefferson County, Fla., on location and plans for construction. *TT 0.3: SP 0.3.*—Oct. 1926 to Sept. 1927 and summers 1928 and 1929 with Florida State Road Dept., successively as Rodman, Instrumentman, Concrete Inspector on paving project, Levelman on topographic survey and paper location on Gulf Coast of Florida, Asst. in Testing Div., drilling cores from and making physical tests of concrete pavements, and finally Instrumentman on concrete paving and shoulder construction. *TT 0.4: SP 0.4.*—June 1931 to date Instrumentman, Louisiana Highway Comm., on surface treatment. *TT 0.1: SP 0.1.—TT 4.9: SP 0.9: P 4.* Refers to R. L. Bannerman, C. C. Brown, T. M. Lowe, P. L. Reed, C. E. Swank.

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(16) **DECKER, SHERMAN OLIVER**, Fowler, Colo. (Age 23. Born Harrisonville, Mo.) 1931 B. S. in C. E., Univ. of Colo. *TT 4: P 4.* Refers to R. L. Downing, C. L. Eckel.

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(5) **DIDDEN, CLEMENT ALBERT**, 139 Twelfth St., S. E., Washington, D. C. (Age 22. Born Washington, D. C.) 1930 B. S., Worcester Pol. Inst. 1931 M. S., Mass. Inst. Tech. *TT 4: P 4.* Refers to C. M. Allen, W. M. Fife, A. W. French, J. W. Howe, C. M. Spofford.

553

(16) **DITTMAN, RICHARD CLARENCE**, 3310 Vine St., Denver, Colo. (Age 21. Born Denver, Colo.) 1931 B. S. C. E., Colo. Univ. *TT 4: P 4.* Refers to E. O. Bergman, R. L. Downing, C. L. Eckel.

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(1) **DOLLARD, JOHN THORVALD**, 157 Saratoga Ave., Yonkers, N. Y. (Age 31. Born Brooklyn, N. Y.) Registered Prof. Engr., States of New York and Florida. Student (nights), Brooklyn Polytechnic Inst. (1922) and Columbia Univ. (1923).—1917 to 1918 Jun. Estimator, Milliken Bros., Inc., structural steel fabricating.—1918 to 1922 with Westinghouse, Church, Kerr & Co., successively as Structural Draftsman in New York office, Instrumentman at Muscle Shoals, Ala., and Shop Inspector at Pottstown, Pa. *TT 2: SP 2.*—1922 to 1924 Structural Draftsman, D. P. Robinson & Co., drafting and designing industrial and office buildings. *TT 1.5: P 0.5: P 1: D 1.*—1924 to 1925 Asst. Field Chf., Murrle & Co., supervising building appraisal of New York Edison property. *TT 1: P 1: RC 1.*—1925 to 1929 with City of Sarasota, Fla., 2 years as Office Engr. in charge of specification writing, contracts and proposals, and bridge design, 1 year Structural Engr. supervising bridge construction (\$175 000) and 1 year City Bldg. Inspector. *TT 4: P 4: RC 4: D 1.*—1929 to 1931 Squad Leader, Eng. Dept., American Can Co., New York City, on design of flat slab concrete industrial buildings. *TT 2.1: P 2.1: D 2.1.*—June 1931 to date structural Designer with Gibbs & Hill, New York City, on monumental buildings. *TT 0.2: P 0.2: D 0.2.—TT 10.8: SP 2.5: P 8.3: RC 5: D 4.3.*—Refers to H. D. Bowman, D. Y. Dimon, T. R. Galloway, A. B. Helser, W. J. Helser, T. K. Thomson.

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(14) **DOLSON, FRANK EDWIN, Jr.**, 6144 Waterman Ave., St. Louis, Mo. Graduating student awarded St. Louis Section prize. (Age 21. Born St. Louis, Mo.) 1931 B. S. in Civ. Eng., Washington Univ. *TT 4: P 4.*—Summer 1928 Inspector with R. H. Buchmueller, City Planner, St. Louis, Mo., on lighting estimates.—*TT 4: P 4.* Refers to E. O. Sweetser, J. L. Van Ornum.

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(6) **DOMBART, WILBUR BRUCE**, 329 North Washington St., Evans City, Pa. Graduating student awarded Illinois Section prize. (Age 30. Born Evans City, Pa.) 1931 B. S. in C. E. Lewis Inst. Tech. *TT 4: P 4.*—Aug. 1923 to July 1924 Chairman, until Feb. 1924 with Central Mfg. Dist. of Los Angeles, Cal., on general construction, then with Ostoff and Duling, Los Angeles, on subdivision. *TT 0.5: SP 0.5.*—Oct. 1924 to March 1925 Instrumentman, H. E. Freemann Co., on subdivision. *TT 0.3: SP 0.3.*—April 1925 to June 1926 Clerk, U. S. Steel Co.—*TT 4.8: SP 0.8: P 4.* Refers to J. G. Bennett, F. G. Gordon.

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(3) **DUCHARME, JEAN MARC**, D. & H. Eng. Camp, Ballston Spa, N. Y. (Age 20. Born Dorchester, Mass.) 1931 C. E., Rens. Pol. Inst. *TT 4: P 4.* Refers to E. R. Cary, L. W. Clark, T. R. Lawson, W. W. Rousseau, H. O. Sharp.

558

(15) **DUDDLESTON, MORRIS THEODORE**, Box 36, Fritch, Tex. (Age 31. Born East St. Louis, Ill.) Sept. 1922 to March 1923 student, Washington Univ. Extension.—Aug. 1919 to Dec. 1920 Rodman for City and County of San Francisco, Hetch Hetchy dam at Groveland, Cal. *TT 0.7: SP 0.7.*—Jan. 1923 to Sept. 1924 Asst. Field Engr. with McClellan & Junkers Feld, Inc., Engrs. and Constrs., New York City, on layout, surveying, driving piles and inspecting waterproofing and chimneys, Cohoka power plant, St. Louis, Mo. *TT 0.9: SP 0.9.*—Oct. 1924 to July 1925 House Contr., at Denver, Colo., constructing stucco cottages. *TT 0.8:*

P 0.8.—March 1926 to Sept. 1928 with Ford, Bacon & Davis, Inc., until May 1927 as Field Engr., 9 months on Fowler compressor station, Monroe, La., designed and built sewer (4 miles), was responsible for layout of project and acted as Asst. Constr. Supt., and 6 months on 22-in. pipe line, Monroe to Baton Rouge, La., being responsible for location of part of line and after June 1927 Gen. Supt., being responsible for construction and field design of Brock compressor station at Farriday, La. (\$1 200 000). *TT 2.5: P 2.5: RC 1: D 0.3.*—Oct. 1928 to June 1929 and Jan. to April 1930 with Williams Bros., Inc., until Feb. 1929 as Asst. Constr. Supt. on Memphis natural gas line, Monroe, La., to Memphis, Tenn., in charge of construction (60 miles), March to June 1929 Estimator assembling data for bid on laying 22-in. pipe line, Monroe to St. Louis (420 miles), and Jan. to April 1930 Constr. Supt. on construction of 26 miles of field pipe line at Monroe. *TT 1.1: P 1.1: RC 0.7.*—July to Dec. 1929 Chf. Engr., Public Service Co. of Kansas, in responsible charge of laying 80 miles of 8-in. main gas line and piping five towns; ordered material, constructed and tested entire project. *TT 0.5: P 0.5: RC 0.5.*—July 1930 to date with Continental Constr. Corporation, until Oct. 1930 assisting on design of ten gas-compressor stations on 24-in. gas pipe line, Amarillo, Tex., to Chicago, Ill., then Res. Engr. on compressor station No. 4, at Hlezer, Kans., in responsible charge of construction (\$1 000 000), and since March 1931 Res. Engr. at Fritch, Tex., in responsible charge of construction, consisting of one 15 000-h. p. 12-unit compressor station and one 71 000-gal. casing head gasoline plant and 32 cottages. *TT 1.1: P 1.1: RC 0.7: D 0.3.*—*TT 7.5: SP 1.6: P 5.9: RC 3: D 0.6.* Refers to S. E. Huey, R. O. Morrison, G. I. Rhodes, G. H. Sager, Jr., F. J. Trelease, C. C. Whittelsey.

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(1) DURR, CHARLES EUGENE, Jr., 1989 Morris Ave., New York City. (Age 25. Born New York City.) 1931 B. S. in C. E., N. Y. Univ. *TT 4: P 4.*—Summers 1926, 1929 and 1930 Rodman, Chairman, Computer, etc. for Leo J. Ehrhart, Inc., New York City.—Feb. to June 1931 Student Instructor in Cement and Materials Testing Laboratories, correcting reports, etc., New York Univ.—*TT 4: P 4.* Refers to H. E. Breed, L. J. Ehrhart, H. Eichin, E. G. Hooper, C. T. Schwarze, D. S. Trowbridge.

560

(1) DWYER, EUGENE MICHAEL, 300 West Twelfth St., New York City. (Age 41. Born Albany, N. Y.) 1913 B. S. in C. E., Catholic Univ. of America. *TT 4: P 4.*—Sept. 1913 to June 1916 Eng. Asst., New York State Public Service Comm., on line and grade, inspection of materials and of steel erection on subway and elevated construction in Brooklyn, N. Y. *TT 1.4: SP 1.4.*—June 1916 to March 1917 with New York State National Guard on Mexican Border.—March 1917 to March 1924 2d Lieut., 1st Lieut. and Capt. of Cavalry, U. S. Army, instructing in map reading, map making and ballistics, Executive to Officer in charge of settling claims for damages to French properties; 1918 to 1922 overseas. *TT 3: P 3: RC 3.*—April 1924 to Jan. 1927 Constr. Engr., Thompson Starrett Co., New York City, lines and grades, co-ordination of subcontractors, monthly estimates, etc., on Namm and Gimbrel Stores, Hotel Roosevelt and New York Evening Post and Elec. Bond & Share Bldgs. *TT 2.8: P 2.8.*—Sept. 1927 to May 1929 Constr. Engr. and later Constr. Supt., Public Service Production Co., Newark, N. J., on 17-story extension to Public Service terminal, Newark, N. J., and later on alterations to terminal. *TT 1.7: P 1.7: RC 1.*—Sept. 1929 to Nov. 1930 Asst. Supt., United Engrs. and Constructors, Newark, in charge of installing mechanical equipment on new building, First Mechanics' Bank of Trenton, N. J. *TT 1.2: P 1.2: RC 1.2.*—*TT 14.1: SP 1.4: P 12.7: RC 5.2.* Refers to P. W. Breithaupt, J. W. Fenton, A. C. Grandy, I. R. Smith, L. F. Wright.

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(10) EASLEY, ROBERT TURNER, Fayetteville, Tenn. (Age 23. Born Dickson, Tenn.) 1931 B. S. in Civ. Eng., Ga. School Tech. *TT 4: P 4.* Refers to R. P. Black, F. C. Snow.

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(8) EKOVIKH, MARTIN THOMAS, 942 Adams St., Waukegan, Ill. (Age 23. Born Waukegan, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.* Refers to J. J. Doland, W. C. Huntington, T. C. Shedd.

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(14) ELLIOTT, BEN ROBERT, 12 East North St., Shawnee, Okla. (Age 23. Born Carthage, Mo.) 1931 B. S., Mo. School of Mines & Metallurgy. *TT 4: P 4.* Refers to C. E. Bardsley, J. B. Butler, E. W. Carlton, W. E. Davis, E. G. Harris.

564

(7) ELLIOTT, GEORGE RAY, 4628 Moran St., Detroit, Mich. (Age 43. Born Holton, Kans.) 1911 B. S. in Civ. Eng., Kans. State Coll. *TT 4: P 4.*—1911 to 1912 Res. Engr., Florida East Coast Ry., on trestle work, recorded piles, inspected timber, gave cut-off grades, some transit work. *TT 0.8: P 0.8: RC 0.8.*—1912 to 1913 Inspector on concrete trestle work, with W. C. Spiker, Atlanta, Ga., inspected concrete work on Fulton County Court-house,

had charge of flume excavating and retaining walls at Millstead, Ga., checked estimates, gave grades and had charge of test borings for three heavy bridges at Rome, Ga. *TT 1.5: P 1.5: RC 1.5.*—1913 to 1914 Supt. of Constr., with A. Tenite Brown, Atlanta, on Forest Hotel, Rome, Ga. (5 stories, reinforced concrete), in full charge of mechanical and architectural work. *TT 0.4: SP 0.4.*—1914 on design and supervision, Dupree & Son, Rome, estimated auditorium (concrete cantilever balcony, 1st floor bowl shape), prepared concrete working drawings and full charge of building construction. *TT 0.5: P 0.5: D 0.5.*—1915 to 1919 Supt. of Outside Constr., with Albert Kahn, Inc., Detroit, Mich., on mechanical and architectural work for Ford Motor Co.'s buildings in Denver, Colo., and Detroit, and on two factories (5 stories) and power-house for Burroughs Adding Machine Co. *TT 3.5: P 3.5: RC 3.5.*—1920 to 1921 designing buildings, building precast concrete houses, looking after construction of four private homes, checked drawings for steel and concrete construction of Devonshire Race Track grand-stand and supervised construction and checked estimates on Prince Edward Hotel (12 stories, steel frame, fireproof), Windsor, Ont. *TT 1: P 1: D 1.*—1921 to 1926 Supt. of Constr., 1 year with Realty Constr. Co., Flint, Mich., on Industrial Bank Bldg. (12 stories, steel frame, fireproof, concrete floors, stone exterior), and 3½ years with Everett Winters Co., Detroit, on Unique Brass Co. and post-office jobs at Baltimore and Cass, Campau Bldg. (5 stories, reinforced concrete) and alterations to Hupp Motor Co.'s plant. *TT 4.5: P 4.5: RC 4.5.*—1927 to date Constr. Engr., Alfes-Elliott Co., Detroit, estimating, designing, laying out and supervising work; laid out job for Auto Elec. & Service Co. (2 stories, reinforced concrete front, 90-ft. truss span in rear), two-story warehouse (designed for 5 stories) for Mack Ave. Cartage Co., Keller Garage (1 story, steel trussed), etc. *TT 6: P 6: RC 6.*—*TT 22.2: SP 0.4: P 21.8: RC 16.3: D 1.5.* Refers to W. V. Buck, L. E. Conrad, J. T. N. Hoyt, J. P. Marshall, M. J. Quinn, W. C. Spiker.

565

(9) **ELLIS, EDISON WILLIAM**, Alger, Ohio. (Age 25. Born Alger, Ohio.) 1930 B. S. in C. E., Ohio Northern Univ. *TT 4: P 4.*—Sept. 1930 to date Instructor in Eng., Ohio Northern Univ. *TT 0.4: SP 0.4.*—*TT 4.4: SP 0.4: P 4.* Refers to G. H. Elbin, A. R. Webb.

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(13) **ENGLE, CHARLES ALGERNON**, 409 Atlas Bldg., Salt Lake City, Utah. (Age 52. Born Logan, Ohio.) 1900 B. Sc., Ohio Normal Univ. (Ohio Northern Univ.) *TT 4: P 4.*—June 1903 to March 1905 student, Armour Inst., Chicago, Ill.—Jan. 1901–May 1903 Asst. on surveys, Topographer, and Transitman on surveys and classification, Dawes Indian Comm., Indian Territory (Oklahoma). *TT 1.2: SP 1.2.*—April 1905 to Aug. 1909 with U. S. Reclamation Service, Idaho, as Instrumentman, Chf. of Party, and (after Sept. 1908) Asst. Engr. on location, design and construction. *TT 2.7: SP 1.7: P 1.*—Aug. 1909 to Aug. 1910 Asst. Engr., Twin Falls (Idaho) Power & Irrigation Co., on location, design and construction of irrigation works. *TT 1: P 1.*—Aug. 1911 to date with U. S. Indian Irrigation Service, until Jan. 1923 on preliminary surveys, investigations, reports, estimates, design, construction, operation and maintenance of irrigation projects on various Indian reservations, nearly 7 years as Asst. Engr. and 4½ years Engr.; since Jan. 1923 Superv. Engr. in charge of work in Dist. 2 (Idaho, Utah and Nevada); March 1927 to July 1928 also member of board of engineers studying and reporting on engineering and economic conditions of certain irrigation projects of U. S. Bureau of Indian Affairs and of Bureau of Reclamation. *TT 20: P 20: RC 20: D 20.*—*TT 28.9: SP 2.9: P 26: RC 20: D 20.* Refers to W. H. Code, E. Mead, P. J. Preston, J. L. Savage, R. F. Walter, A. J. Wiley.

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(11) **ERICKSON, JACOB**, Box 2107, Bisbee, Ariz. (Age 21. Born Bisbee, Ariz.) 1931 B. S. C. E., Univ. of Ariz. *TT 4: P 4.* Refers to E. S. Borgquist, F. C. Kelton, J. C. Park.

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(5) **ERTHAL, KARL EMIL**, 3923 Ridgewood Ave., Baltimore, Md. (Age 28. Born Bristol, Pa.) 1931 B. E., Johns Hopkins Univ. *TT 4: P 4.* Refers to T. F. Comber, Jr., J. H. Gregory, J. T. Thompson.

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(1) **ETTLINGER, WILLIAM DeROY**, 500 West End Ave., New York City. (Age 25. Born New York City.) 1930 B. S., and 1931 C. E., Columbia Univ. *TT 4: P 4.* Refers to A. H. Beyer, D. M. Burmister, J. K. Finch, W. J. Krefeld, C. R. Wyckoff.

570

(3) **EWING, CHARLES RUSSELL**, Randolph, N. Y. (Age 21. Born Randolph, N. Y.) 1931 B. S. in Civ. Eng., Ohio Northern Univ. *TT 4: P 4.* Refers to G. H. Elbin, A. R. Webb.

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(5) **FAIGLE, JOHN EMIL**, Navy Dept., Washington, D. C. (Age 28. Born Dayton, Ohio.) 1927 U. S. Naval Acad. 1930 C. E., and 1931 M. C. E., Rens. Pol. Inst. *TT 4: P 4.*—June 1927 to June 1928, summers 1929 and 1930 and at present with Navy Dept., Washington,

D. C., until June 1928 in Constr. and Repair Div., on board U. S. S. *Colorado*, summer 1929 on inspection at Carnegie Steel, American Bridge and Westinghouse Elec. & Mfg. Cos., and other plants in Pittsburgh, Pa., area and on railroad survey at West Bridgewater, Vt., and summer 1930 on inspection at Brooklyn (N. Y.) Edison Co. TT 0.7: SP 0.7—TT 4.7: SP 0.7: P 4. Refers to L. W. Clark, T. R. Lawson.

572

(2) FARQUHAR, FRANK SHAW, 59 Park Ave., Winthrop, Mass. (Age 23. Born Boston, Mass.) 1931 B. S. in Civ. Eng., Tufts Coll. TT 4: P 4. Refers to H. P. Burden, R. W. Lefavour, F. N. Weaver, E. H. Wright.

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(1) FEINBERG, ABRAHAM, 622 Stone Ave., Brooklyn, N. Y. (Age 24. Born Yaney, Russia.) 1930 B. S. in C. E., Univ. of Ala. TT 4: P 4.—Feb. 1930 to July 1931 Structural Steel Draftsman, American Bridge Co., Elmira Heights, N. Y. TT 0.7: SP 0.7—TT 4.7: SP 0.7: P 4. Refers to G. J. Davis, Jr., H. W. Preston, K. H. Wang, G. J. Watson.

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(7) FELIX, RICHARD KNOTWELL, 507 Hill St., Ann Arbor, Mich. (Age 24. Born Harrisburg, Pa.) 1931 B. S. in Civ. Eng., Univ. of Mich. TT 4: P 4. Refers to J. H. Cissel, L. M. Gram, W. C. Hoad, W. S. Housel, R. H. Sherlock, C. O. Wisler, J. S. Worley.

575

(4) FELKER, FRANKLIN MECHTLEY, 121 Pannebaker Ave., Lewistown, Pa. (Age 22. Born Lewistown, Pa.) 1931 B. S., Univ. of Pittsburgh. TT 4: P 4. Refers to A. Diefendorf, L. C. McCandless, J. H. Smith.

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(6) FENELON, EARL STANLEY, Care, H. J. Heinz Co., Pittsburgh, Pa. (Age 38. Born Bridgeport, Conn.) 1914 Ph. B., Yale Univ. TT 3: P 3.—March 1915 to April 1916 Field Engr., James Stewart Co., New York City, on construction of plants for Remington Arms Co. at Bridgeport, Conn. and Ilion, N. Y. TT 1.1: P 1.1: RC 1.1.—April 1916 to May 1918 with The Foundation Co., New York City, as Supt. of Constr. on additions to paper mill, South Brewer, Me., Supt. of Materials on construction of Wooden Merchant Vessels for U. S. Emergency Fleet Corporation, Kearney, N. J., and Purchasing Agt., on construction of chlorine gas plant for U. S. Government, Magnolia, Md. TT 2.1: P 2.1: RC 1.1.—May 1918 to April 1919 with U. S. Naval Reserves, Civ. Eng. Corps, Bureau of Yards and Docks, as Ensign and Lieut. (j.g.) on construction of concrete War and Navy Bldgs., Washington, D. C. TT 0.9: P 0.9: RC 0.9.—April to Aug. 1919 Member of Settlement Div., Hog Island, Pa., settlement of claims due to cancellation of ship construction. TT 0.3: P 0.3.—Aug. 1919 to July 1923 with American Chile Co., Long Island City, N. Y., as Constr. Engr., supervising erection and equipment of 5-story concrete plant for manufacture of chewing gum, later Production Mgr. of the plant. TT 4: P 4: RC 2.—July 1923 to May 1924 Supervisor of Production, Proctor and Gamble Co., Port Ivory, N. Y., shipments, receipt of materials and traffic. TT 0.9: P 0.9.—June 1924 to March 1925 Supt. of Constr., Walitt Operating Co., on erection of 15-story addition to Hotel Weylin, New York City. TT 0.8: P 0.8: RC 0.8.—March 1925 to date with H. J. Heinz Co., Pittsburgh, Pa., first in Manufacturing Dept., then Asst., Eng. Dept., in charge of engineering, directing preparation of plans and specifications for construction, maintenance and supervision of construction operations, investigation of economic aspect of proposals for plant and production betterment. TT 6.4: P 6.4: RC 2.4: D 2.4.—TT 19.5: P 19.5: RC 8.3: D 2.4. Refers to H. Crosby, C. A. Hahn, J. T. N. Hoyt, F. A. Pruitt, G. H. Shaw.

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(15) FERNANDEZ, RODOLFO MAXIMILIANO, San Juan de Letran No. 24, Mexico City, D. F., Mexico. (Age 29. Born Fresnillo, Zacatecas, Mexico.) 1922 C. E., Branch Inst. of Eng.—June 1922 to June 1923 Asst. Supt., Turner Construction Co., New York City, on construction of reinforced concrete buildings. TT 0.5: SP 0.5.—Sept. 1923 to March 1924 Asst. Supt., Huasteca Petroleum Co., Tampico, Tamps, Mexico, on construction of gasoline refinery at Buenavista Terminal, Tampico. TT 0.5: P 0.5.—May 1924 to date with Ingenieros y Contratistas "Martin", S. A., Mexico, D. F., on construction of pipe lines, oil tank farms, pump stations, etc., city paving (bituminous penetration and water bound macadam) and sheet asphalt, sewer construction, including disposal plants, highway and air-port construction, underground telephone conduit systems; since Jan. 1931 on design and construction of buildings, sewers, highways, water systems, residences, etc., having direct supervision. TT 6.5: P 6.5: RC 6.5: D 1.6.—TT 8: SP 0.5: P 7.5: RC 6.8: D 1.8. Refers to G. Boschke, G. D. Camp, C. H. Howell, A. W. Naylor, H. Nunn.

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(1) FERRARO, CHARLES ANTHONY, 868 Troy Ave., Brooklyn, N. Y. (Age 23. Born Brooklyn, N. Y.) 1931 C. E., Brooklyn Pol. Inst. TT 4: P 4. Refers to H. P. Hammond, L. F. Rader, E. J. Squire.

579

(13) **FINGADO, JACK LANKENAU**, 2317 Q St., Sacramento, Cal. Graduating student awarded San Francisco Section prize. (Age 23. Born Sacramento, Cal.) 1929 A. B. in Eng., and 1931 C. E., Stanford Univ. *TT 4: P 4.*—1922 to 1928 (part of time) Rodman, Chainman and Instrumentman on surveys in Sacramento and vicinity.—Summers 1927 and 1928 Draftsman, Posting Clerk and Comparer, Fidelity Title Insurance Co., Sacramento.—June-Dec. 1929 and at present with U. S. Bureau of Public Roads, San Francisco, Cal., until Dec. 1929 as Jun. Highway Engr., being Officeman for field party, at present with Bridge Div. *TT 0.3: SP 0.3.*—*TT 4.3: SP 0.3: P 4.* Refers to D. R. Cate, J. C. L. Fish, L. B. Reynolds, T. E. Stanton, Jr., J. B. Wells.

580

(9) **FINKBINE, AMOS**, 54 Glenwood Ave., Cincinnati, Ohio. (Age 27. Born Annapolis, Md.) 1928 C. E., Univ. of Cin. *TT 4: P 4.*—Oct. 1928–April 1929 Draftsman, Fort Pitt Bridge Works, structural detailing on viaduct, bridge and mill building work. *TT 0.3: SP 0.3.*—May 1929 to date Senior Eng. Draftsman, Flood Control Sec., U. S. Engrs., on stream flow and hydro-electric power calculations, cost estimates for power houses and dams, compiling data for reports. *TT 2.2: P 2.2.*—*TT 6.5: SP 0.3: P 6.2.* Refers to C. E. Hammell, H. B. Luther, R. W. Renn, W. S. Winn.

581

(2) **FISH, JOSEPH THEODORE**, East Kingston, N. H. (Age 22. Born Kensington, N. H.) 1931 B. S., Univ. of N. H. *TT 4: P 4.*—Summers Rodman, Lane Constr. Co. (1927) and Chf. of Survey, Delaware & Hudson R. R. (1930).—*TT 4: P 4.* Refers to E. W. Bowler, G. W. Case.

582

(1) **FITZGERALD, CLIFFORD FITZMAURICE**, 314 West Seventy-Seventh St., New York City. (Age 38. Born Parry Sound, Ont., Canada.) 1912 graduate, Trinity Coll. School.—April 1919 to May 1921 in charge of asphalt inspection and testing for Wm. Miller, Cons. Engr., Detroit, Mich. *TT 1.1: P 1.1: RC 1.1.*—May 1921 to May 1923 with City of Windsor, Ont., Canada, in charge of asphalt construction and maintenance of streets and roads. *TT 2: P 2: RC 2.*—May to Oct. 1923 Engr.-in-Chg. for H. Eltinge Breed, New York City, laying out streets and inspecting construction work. *TT 0.4: P 0.4.*—Oct. to Dec. 1923 Supt. of Constr. for James E. Cashman, Burlington, Vt., building roads and sewers and in field charge of construction work. *TT 0.2: P 0.2: RC 0.2.*—Jan. 1924 to March 1925 Foreign Technical Instructor, Barber Asphalt Co., Philadelphia, instructing engineers in Singapore and India in construction of asphalt roads. *TT 1.3: P 1.3: RC 1.3.*—May 1925 to April 1928 Engr.-in-Chg. of asphalt construction, until Dec. 1925 with Gilligan-Barrett-Cahill Co., Newark, and after Jan. 1926 with R. S. Sowerkult, Haledon, N. J. *TT 2.9: P 2.9: RC 2.9.*—May 1928 to Nov. 1929 Mgr., Pyramid Rock Asphalt Co., New York City, in charge of sales and technical literature. *TT 1.5: P 1.5: RC 1.5.*—1930 Engr.-in-Chg. of asphalt construction, Seabrook Eng. Corporation, New York City, being Technical Supervisor in Russia and on technical promotion work in Germany. *TT 1: P 1.*—Three years also on asphalt testing and setting up mixes for various types of roads.—*TT 10.4: P 10.4: RC 10.4.* Refers to H. E. Breed, C. H. Covey, D. M. Forester, F. C. Hitchcock, A. W. Kinney, R. W. Parkhurst.

583

(1) **FIVE, HELGE**, 49 Mason Ave., Babylon, N. Y. (Age 29. Born Kvamli Stod, Nord-Troendelag, Norway.) 1925 C. E., Norwegian Inst. Tech. *TT 4: P 4.*—Sept. to Dec. 1925 Inspector with Mun. Engr., Steinkjir, Norway, on reinforced concrete dock, wooden trestle bridges and dock paving. *TT 0.1: SP 0.1.*—Dec. 1925 to April 1927 Draftsman and Designer, Highway Office, Nord-Troendelag, on design and plans for reinforced concrete slab and stone arch bridges. *TT 1: SP 0.4: P 0.6: RC 0.6.*—June 1927 to date with Long Island State Park Comm., until April 1928 as Laborer, surveying, drafting, inspecting and on design and plans for buildings and water-supply systems, April to Dec. 1928 Asst. Park Engr. (Design) and since Dec. 1928 Park Engr. (Design), on design and plans for buildings, water towers, water-supply systems, wells, tanks and arch and rigid-frame bridges. *TT 3.9: SP 0.2: P 3.7: RC 3.5: D 3.5.*—*TT 9: SP 0.7: P 8.3: RC 4.1: D 3.5.* Refers to H. G. Babcock, A. E. Howland, E. R. Kent, P. H. Lovering, E. Praeger.

584

(1) **FOOTE, ARTHUR JAMES**, 135 Harmon Drive, Larchmont, N. Y. (Age 46. Born Goffstown, N. H.) May 1904 to May 1906 Chainman and Rodman for C. E. Gay, Civ. Engr. and Surveyor, Lynn, Mass. *TT 1: SP 1.*—May 1906 to June 1912 with Boston & Albany R. R. as Chainman and Rodman, Inspector in charge of construction of steamship piers and Chf. of survey party. *TT 5.5: SP 0.5: P 5.*—June 1912 to May 1915 with Directors of Port of Boston as Chf. of plane table party, Draftsman and Designing Draftsman,

Commonwealth Pier & South Boston Dry Dock. *TT 3: P 3: D 2.*—June 1915 to July 1921 Recorder, Interstate Commerce Comm., in charge of valuation of Grand Central Terminal. *TT 4: SP 2: P 2: RC 2.*—July 1921 to Aug. 1923 with Nicholas S. Hill, Jr., as Res. Engr. in charge of construction of sewage-disposal plant and outfall sewer, Town of Mamaroneck, N. Y., and Chf. Draftsman in charge of drafting and computations for various water-works appraisals. *TT 2: P 2: RC 2.*—Aug. 1923 to date in private practice, Larchmont, N. Y., on preliminary investigation, design and supervision of construction for sewer system for village of Mamaroneck (\$680 000), design and supervision of construction for additions to sewage-treatment plant, including pumping plant, garage, sand-drying beds, digestion tank and sewage-relift stations (\$112 000), design and supervision of construction of Dillon Park Sewer (\$180 000) and on design and supervision of paving (\$300 000) for Town of Mamaroneck, design and supervision of real-estate development, Harrison, N. Y., including drainage, sewers, water and gas, paving, gutters (\$85 000); also Associate Engr. in charge of design and construction of Pine Brook Drain for Pine Brook Drainage Comm. (\$200 000). *TT 8: P 8: RC 8: D 8.—TT 24.5: SP 4.5: P 20: RC 12: D 10.* Refers to J. Ayer, R. E. Barrett, H. H. Chase, P. J. Gray, N. S. Hill, Jr.

585

(1) FOSTER, FRANCIS XAVIER, 2659 Bainbridge Ave., New York City. (Age 23. Born New York City.) 1929 B. S. in Eng., and 1930 C. E., Manhattan Coll. *TT 4: P 4.* Refers to J. J. Costa, F. A. O'Hare.

586

(1) FRANCIS, JOSEPH INGHAM, 32 Third St., Weehawken, N. J. (Age 25. Born Remsen, N. Y.) 1928 C. E., Rens. Pol. Inst. *TT 4: P 4.*—Sept. 1928 to April 1929 Computer, Utica Gas & Elec. Co. *TT 0.3: SP 0.3.*—May 1929 to date Chainman, M. of W. Dept., New York Central R. R., surveying, drafting, designing drainage and sidings and estimating. *TT 1.1: SP 1.1.—TT 5.4: SP 1.4: P 4.* Refers to L. W. Clark, B. E. White.

587

(8) FRANZEN, EDWIN CHALMER, Y. M. C. A. Bldg., Rock Island, Ill. (Age 23. Born Golden, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.* Refers to J. J. Doland, W. C. Huntington, G. W. Pickels, T. C. Shedd, C. C. Wiley.

588

(3) FREMOUW, GERRIT DANGREMOND, 155 Fernwood Ave., Syracuse, N. Y. (Age 22. Born Newark, N. Y.) 1931 B. S. in Civ. Eng., Clarkson Coll. Tech. *TT 4: P 4.*—Summer 1930 Instrumentman for Booth & Flynn on Ridge Road bridge, Rochester, N. Y., on layout, estimating and drafting. June 1931 to date Draftsman, estimating, concrete designing and detailing for Glenn D. Holmes, Cons. Engr., Syracuse. *TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4.* Refers to W. H. Allison, W. J. Farrisee, G. D. Holmes, E. F. O'Brien, F. C. Wilson.

589

(1) FRIEDLAND, JACOB, 2807 Claflin Ave., Bronx, N. Y. (Age 51. Born Libau, Latvia.) Licensed Prof. Engr., New York State. 1900 B. S., Coll. of City of N. Y. 1907 C. E., and 1908 A. M. (Sci.), Columbia Univ. *TT 4: P 4.*—May 1907–Dec. 1909 with Barge Canal Office, until March 1909 as Eng. Draftsman at Albany, N. Y., on design of concrete and steel hydraulic structures, including four waste weirs with sluiceways and operating mechanism, culverts, retaining walls, channels for runoff, etc., estimates, layouts, studies, checking strength of lock wall and lock gates, etc., and after March 1909 Leveler at Amsterdam, being Asst. to Res. Engr. on erection of five movable bridge dams and a rock fill dam on Mohawk River, inspecting and keeping track of shipments, cost data, estimates, design, etc., having charge of office in absence of Res. Engr. *TT 2.7: P 2.7: D 1.8.*—Jan. 1910 to April 1911 Asst. Engr., Public Service Comm., New York City, designed 110th St. station and south approach to Harlem River tunnel on Lexington Ave. Subway, trunk sewers on 4th Ave. Subway, Brooklyn, N. Y., checked strength of railroad bridges at Wakefield, N. Y., etc. *TT 1.2: P 1.2: D 1.2.*—April to May 1911 Asst. Engr., Dept. of Water supply, Gas and Electricity, New York City, on water-waste prevention survey, Manhattan and Brooklyn, in charge of some inspectors, pitometer work, etc. *TT 0.1: P 0.1: RC 0.1.*—May 1911 to Feb. 1918 with Bronx Borough, New York City, until May 1913 as Structural Draftsman, Grade 4 (Designer), designing, estimating and layout out steel and concrete viaducts, under and over crossings, etc., inspected highway bridges, after March 1913 Asst. Engr. with Pres. of Borough, acting as Tech. Asst. to Cons. Engrs. on layouts, plans and estimates on various improvements and alterations studies, investigations, reports, court attendance, etc., including question of filtering Croton water supply at Jerome Park, removing overhead ammonia pipes, on Eagle Ave., Bronx; studies of various refrigerating plants, removal of columns of New York, Westchester & Boston R. R. over Boston Road, garbage disposal plants, 161st St. improvement, with tunnel under Concourse and approaches to MacCombs dam bridge, studies of sewage disposal around New York and relation of Metropolitan Sewerage Comm. to Bronx Sewerage System, study of

plans for eliminating elevated railroad and subway congestions at 149th St. and 3d Ave., and numerous other questions. *TT 6.7: P 6.7: RC 6.7: D 6.7.*—Feb. 1918 to March 1921 Designer, Chile Exploration Co., New York City, on design of parts of copper mining plants at Rancagua, Chuquibambata and Sewell, Chile, large reinforced concrete leaching vats, railroad bridges, retaining walls, foundations for machinery and buildings and for aerial cableway at Sewell, also steel and timber details, studies for piping for solutions and estimates. *TT 3.1: P 3.1: RC 1.5: D 3.1.*—July 1921–Dec. 1929 Executive Mgr., Affiliated Garage Corporation, New York City, operating seven garages, preparing contracts and specifications for and carrying out some of work for reconstructing and installing ramps, installing, and reconstructing and maintaining elevators, installing, repairing and maintaining heating systems, lighting, water supply, strengthening floors for increased loads, waterproofing defective concrete floors, installing compressed air systems, etc., purchasing supplies, etc. *TT 8.5: P 8.5: RC 8.5: D 8.5.*—1929 to Feb. 1930 Asst. Engr., New York Central R. R., New York City, on design and layout of foundations on West Side Improvements, studies and estimates. *TT 0.4: P 0.4: D 0.4.*—Feb. 1930 to date Asst. Engr. with Pres., Borough of Manhattan, New York City, on West Side Elevated Highway, layouts, designs and estimates. *TT 1.4: P 1.4: RC 1.4: D 1.4.*—*TT 28: P 28: RC 18.2: D 23.1.* Refers to J. W. F. Bennett, C. S. Green, G. L. Lucas, C. M. Pinckney, G. M. Purver, A. I. Ralsman, R. J. Smyth.

590

(4) FUNK, GEORGE JAMES, R. D. No. 2, Phoenixville, Pa. (Age 29. Born Philadelphia, Pa.) 1931 Diploma in Structural Eng., Drexel Inst. Evening School.—March 1918 to April 1924 Apprentice Draftsman, Phoenix Bridge Co., Phoenixville, Pa. *TT 3.1: SP 3.1.*—April 1924 to Nov. 1927 Structural Draftsman, Shoemaker Bridge Co., Pottstown, Pa., being Detailer of structural steel for bridges and buildings. *TT 2.8: SP 0.8: P 2.*—Nov. 1927 to date Structural Draftsman, American Bridge Co., Pencoyd (Pa.) plant, being Structural Steel Detailer and Checker on bridge and building work. *TT 3.5: SP 0.3: P 3.*—*TT 9.2: SP 4.2: P 5.* Refers to F. L. Castleman, S. Gowen, J. R. Lambert, J. H. Rowland, L. F. Shoemaker, Jr., S. H. Widdicombe.

591

(1) FUNK, LOUIS, 550 Riverside Drive, New York City. (Age 28. Born Aulendorf, Germany.) Student, Wuertemberg State Coll., Stuttgart, Germany (1921 and 1922), and extension courses in Washington Univ., St. Louis, Mo., and Columbia Univ., New York City.—Aug. 1920 to Sept. 1921 Apprentice in carpentry, with J. Walser, Aulendorf, Germany, on layout, construction and erection of residences, industrial and storage buildings, alterations and repairs. *TT 0.6: SP 0.6.*—Aug. 1922 to May 1923 Draftsman, Timekeeper and Inspector with Theo. Huber, Archt. and Gen. Contr., Aulendorf, on proposed and detail drawings, computations and estimates. *TT 0.4: SP 0.4.*—Aug. 1924 to June 1925 Rodman and Chainman with Chas. Keck, C. E. and Surveyor, St. Louis, Mo., and June to Nov. 1925 Chainman and Levelman with W. B. Hoag, C. E. and Surveyor, San Francisco, Cal., field work for subdivision and municipal engineering. *TT 0.7: SP 0.7.*—Feb. to Nov. 1926 Head Chainman, U. S. Bureau of Public Roads, San Francisco, ran level and cross-sectioning party, plotted profiles and computed quantities, set slope and grade, also prospecting. *TT 0.4: SP 0.4.*—May 1927 to May 1928 Surveyman, U. S. Engr. Office, Second Dist., New York City, field work for hydrographic surveys for river and harbor improvements. *TT 0.5: SP 0.5.*—May 1928 to date Chf. of Party and Computer, with Taylor & Knight, Cons. and San. Engrs., Newark, N. J., on stadia surveys for flood control studies, surveys and estimates for concrete pavement, sidewalk and curb improvements, topographic and location surveys for water distribution and sewer systems, etc. *TT 2: P 2: RC 2.*—*TT 4.5: SP 2.5: P 2: RC 2.* Refers to W. F. Barck, G. W. Knight, C. J. Laube, W. G. Taylor, B. Wuth.

592

(8) GALINATO, JUAN GALINATO, 1507 West Adams St., Chicago, Ill. (Age 25. Born Paoay, Ilocos Norte, Philippine Islands.) 1931 B. S. in Civ. Eng., Univ. of Ill. *TT 4: P 4.* Refers to J. S. Crandell, J. J. Doland, G. W. Pickels, W. H. Rayner, J. Vawter.

593

(1) GARILLI, PAUL, 8 Baxter St., New York City. (Age 23. Born Piacenza, Italy.) 1931 B. S., N. Y. Univ. *TT 4: P 4.* Refers to E. G. Hooper, C. T. Schwarze.

594

(9) GARMONG, KARL RICHARD, 630 South Twenty-fifth St., Terre Haute, Ind. (Age 23. Born Terre Haute, Ind.) 1931 B. S., Rose Pol. Inst. *TT 4: P 4.* Refers to R. E. Hutchins, R. L. McCormick.

595

(7) GEBHARD, JEROME PETER, 5410 State St., Milwaukee, Wis. (Age 30. Born Greenfield, Wis.) 1923 C. E., Marquette Univ. *TT 4: P 4.* May to Nov. 1921 and May 1922 to Sept. 1924 Supt. on road and bridge construction, successively with Appleton (Wis.) Constr.

Co., and Whitewater (Wis.) Bridge Co. TT 2.5: SP 0.2: P 2.3: RC 2.5.—Sept. 1924 to June 1925 Res. Engr., Pennsylvania Dept. of Highways. TT 0.7: P 0.7: RC 0.7.—June, 1925 to Feb. 1926 Asst. Supt. of building construction, Federal Rubber Co., Cudahy, Wis. TT 0.7: P 0.7: RC 0.7.—March 1926 to date with A. C. Guetzkow, Inc., Milwaukee, Wis., first as Supt., then as member of firm, past 3 years being Secy. and Mgr., being entirely responsible for management (business over \$200 000 annually); work handled entirely by applicant includes West Allis Theater and Office Bldg. (\$225 000), Waukesha Municipal Hospital (\$167 000), work for Sewerage Comm., etc. TT 5.4: P 5.4: RC 5.4.—TT 13.3: SP 0.2: P 13.1: RC 9.1. Refers to H. H. Brown, C. A. R. Distelhorst, H. L. Foster, W. Landsiedel, J. C. Pinney, E. D. Roberts, D. W. Townsend.

596

(14) GEORGE, PRESTON WILLIAM, Box 56, Hollis, Okla. (Age 24. Born Kaw City, Okla.) 1931 B. S., Dept. of Civ. Eng., Okla. A. & M. Coll. TT 4: P 4.—Feb. 1929 to Jan. 1930 Rodman (3 months), Levelman (3 months) and Surveyman, Chf. of Field Party (6 months), U. S. Engrs., Bureau of Rivers and Harbors, Memphis, Tenn., on surveys of dam and reservoir sites in Oklahoma and Arkansas. TT 0.8: SP 0.3: P 0.5: RC 0.5.—Feb. 1931 to date Inspector, Dept. of Highways, State of Oklahoma, inspecting structures on grade and drainage work, and on office and field work. TT 0.2: SP 0.2.—TT 5: SP 0.5: P 4.5: RC 0.5. Refers to G. C. Dobson, E. R. Stapley.

597

(15) GESSNER, EDWARD HEIM, 119 Audubon Boulevard, New Orleans, La. (Age 24. Born New Orleans, La.) 1931 B. C. E., Tulane Univ. TT 4: P 4.—April to Sept. 1926, Instrumentman with F. Shutts & Sons, Lake Charles, La.—July 1927 to Sept. 1928 Asst. Engr., Lake Charles Harbor & Terminal Dist. TT 1.1: SP 0.1: P 1: RC 1.—TT 5.1: SP 0.1: P 5: RC 1. Refers to D. Derickson, W. B. Gregory, B. H. Grehan, A. M. Shaw, E. E. Shutts, L. C. Smith, A. A. Woods.

598

(14) GEVECKER, VERNON ARTHUR CHARLES, 5036 Maffitt Ave., St. Louis, Mo. (Age 22. Born St. Louis, Mo.) 1931 B. S. in C. E., Mo. School of Mines. TT 4: P 4.—Summer 1930 Surveyman, U. S. Engr. Office, St. Louis, Mo., levels, map drawings, computing and plotting river-discharge measurements and hydrographs and drafting TT 4: P 4. Refers to C. E. Bardsley, J. B. Butler, E. W. Carlton, E. G. Harris, E. O. Sweetser.

599

(12) GHIGLIONE, ANGELO FRANCESCO, 1721 Thirty-first Ave., South, Seattle, Wash. (Age 22. Born Seattle, Wash.) 1931 B. S. in C. E., Univ. of Wash. TT 4: P 4.—Summer 1929 Instrumentman and Draftsman, U. S. Engr. Office, Juneau, Alaska, dredging operations in Wrangel Narrows, Alaska.—TT 4: P 4. Refers to I. L. Collier, G. E. Hawthorn, C. C. May, J. W. Miller, C. C. More, R. G. Tyler.

600

(10) GIBSON, EDWIN EMMONS, 113 Ashley Ave., Charleston, S. C. (Age 23. Born Swarthmore, Pa.) 1931 C. E., Rens. Pol. Inst. TT 4: P 4.—Oct. 1923 to Feb. 1924 Chainman, Stakeman and Rodman, and May to Sept. 1924 on survey, Florida, Western & Northern R. R. TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4. Refers to L. W. Clark, J. E. Gibson, H. O. Sharp.

601

(1) GILBERTY, FRANK RALPH, 194 Front St., Hempstead, N. Y. (Age 22. Born New York City.) 1931 C. E., Brooklyn Pol. Inst. TT 4: P 4.—Summers 1929 and 1930 successively Asst. to Foreman, with P. J. Murphy, Jamaica, N. Y., setting grades and elevations for foundations, and Draftsman, New York & Queens Light & Power Co., Flushing, N. Y.—TT 4: P 4. Refers to H. R. Codwise, H. P. Hammond, C. E. D. Marshall, L. F. Rader, E. J. Squire.

602

(1) GIONTI, ARTHUR, Jr., Gionti Pl. and Venna Ave., North Haledon, N. J. (Age 25. Born Haledon, N. J.) 1929 B. S., Cooper Union Inst. Tech. TT 4: P 4.—June 1926 to Oct. 1927 and June 1929—Jan. 1931 Asst. to Robt. P. Zoerner, Paterson, N. J., surveying, mapping and calculating. TT 1.5: SP 1.5.—TT 5.5: SP 1.5: P 4. Refers to H. R. Codwise, F. E. Foss, G. Morrison, J. P. J. Williams.

603

(8) GOLDBERG, JOHN EDWARD, 6530 South Sangamon St., Chicago, Ill. Graduating student awarded Illinois Section prize. (Age 21. Born Seattle, Wash.) 1930 B. S. in E. and 1931 C. E., Northwestern Univ. TT 4: P 4.—Summer 1929 Timekeeper, Instrumentman and Office Asst., Turner Constr. Co.—Summer 1930 Jun. Highway Engr., State of Illinois, being Asst. Res. Engr.—Sept. 1930 to June 1931 Fellowship Instructor in Civ. Eng., Northwestern Univ.—TT 4: P 4. Refers to F. R. McMillan, G. A. Maney.

604

(2) **GOVE, ALFRED WALLACE**, Box 112, Milford, Mass. (Age 22. Born Lancaster, Mass.) 1931 B. S. in Civ. Eng., Worcester Pol. Inst. TT 4: P 4. Refers to A. W. French, J. W. Howe, A. J. Knight.

605

(16) **GRADY, JOHN FRANCIS**, 607 South Evergreen, Chanute, Kans. (Age 34. Born Fairmount, Kans.) 1920 B. S. in Civ. Eng., and 1923 C. E., Kans. State Agri. Coll. TT 4: P 4.—July to Dec. 1918 with U. S. Army.—June 1920 to March 1922 Instrumentman, Kansas Highway Comm. TT 1.7: P 1.7.—March 1922 to Oct. 1923 Designer and Res. Engr. on Athletic Stadium, Manhattan, Kans. TT 1.6: P 1.6: RC 1.6: D 0.4.—Nov. 1923 to July 1930 with Labette Co., Kans., until Feb. 1926 as Asst. County Engr. on highway plans, then County Engr., supervising plans and highway construction and maintenance: TT 6.7: P 6.7: RC 4.4: D 2.3.—July 1930 to date with State Highway Comm. of Kansas, as Res. Engr. on concrete highway construction, Federal Aid Project No. 196, Maintenance Supt., Div. No. 6 and Div. Engr., Div. No. 4. TT 1: P 1: RC 1.—TT 15: P 15: RC 7: D 2.7. Refers to H. D. Barnes, W. V. Buck, L. E. Conrad, O. J. Eldmann, M. W. Furr, A. A. Laird, J. A. Roby.

606

(1) **GRAFF, ALVIN ROBERT**, 133 Coe Ave., Hillside, N. J. (Age 22. Born Newark, N. J.) 1931 B. S., Newark Coll. of Eng. TT 4: P 4. Refers to H. N. Cummings, H. W. Hellmann, W. S. LaLonde, Jr.

607

(1) **GRAHAM, HARRY EDWARD**, 121 Highland Ave., Jersey City, N. J. (Age 24. Born Chestertown, Md.) 1927 B. S. in C. E., Lafayette Coll. TT 4: P 4.—June 1927 to June 1928 Transitman, United Fruit Co., Puerto Barrios, Guatemala, in charge of native party on surveys. TT 0.6: SP 0.3: P 0.3: RC 0.3.—June to Sept. 1928 Jun. Asst. Civ. Engr., Grade 1, Provisional New York State Bureau of Highways, being Inspector on construction. TT 0.2: P 0.2.—Sept. 1928 to April 1931 with American Bridge Co., Pencoyd, Pa., and Trenton, N. J., as Detailer and Draftsman on structural steelwork. TT 2.6: P 2.6.—April 1931 to date Structural Draftsman, New Jersey State Highway Comm., Div. of Bridges, approving steel drawings, estimating and designing bridges. TT 0.3: P 0.3.—TT 7.8: SP 0.3: P 7.5: RC 0.3. Refers to F. L. Castleman, R. S. DuBois, S. Johannesson, W. S. Lohr, L. Perry, L. R. Shellenberger.

608

(11) **GRANT, FREDERICK NICKERSON**, Route 10, Box 717, Phoenix, Ariz. (Age 43. Born Athens, Ga.) 1908 E. E., Univ. of Ga. TT 4: P 4.—Oct. 1908 to Feb. 1912 Clerk, Jacksonville (Fla.) Elec. Co.—Feb. 1912 to Aug. 1914 Rodman, Cost Clerk and Transitman, and Feb. to Oct. 1915 Cost Clerk, Arizona Copper Co., Clifton, Ariz., on smelter construction and operation, etc. TT 1.6: SP 1.6.—Aug. 1914 to Jan. 1915 with Greenlee County, Engr., Clifton, as Inspector on concrete jail construction, and transitman on road construction. TT 0.2: SP 0.2.—Oct. 1915 to date (except May 1918 to March 1919 with U. S. Army) with Arizona Highway Dept., until May 1918 as Rodman, Levelman, Cost Clerk and Transitman, on road and bridge construction; March 1919 to June 1922 Asst. Engr., on road construction; June 1922 to June 1924 Locating Engr., being Chf. of Party on highway location, and June 1924 to Aug. 1927 Res. Engr., on highway construction, Federal Aid projects; Aug. 1927 to July 1930 Dist. Maintenance Engr., in charge of maintenance in Northern Arizona; since July 1930 Dist. Engr., in charge of maintenance and construction in Dist. No. 2. TT 14.2: SP 0.8: P 13.4: RC 9.1.—TT 20: SP 2.6: P 17.4: RC 9.1. Refers to R. A. Hoffman, W. W. Lane, E. V. Miller, J. S. Mills, T. S. O'Connell, J. W. Powers, C. C. Small.

609

(1) **GRAZULIS, ALBERT CHARLES**, 11 West Twenty-eighth St., Bayonne, N. J. (Age 20. Born Brooklyn, N. Y.) 1931 B. S. in C. E., N. Y. Univ. TT 4: P 4. Refers to A. Haring, E. G. Hooper, C. T. Schwarze.

610

(15) **GREEN, JOHN NORVELL**, Box B, Bridgeport, Tex. (Age 30. Born Tokeen, Tex.) 1921 to 1922 Student in Eng. Univ. of Texas. TT 0.5: P 0.5.—1924 to 1930 Res. Engr., West Texas Utilities Co., construction and installation of steam power and ice plants and a dam. TT 6.8: P 6.8: RC 5.—1930 to date Engr., McKenzie Constr. Co. and Uvalde Constr. Co. TT 0.9: P 0.9: RC 0.9.—TT 8.2: P 8.2: RC 5.9. Refers to O. N. Floyd, D. F. Horton, J. L. Lochridge, H. F. McFarland, Jr., W. H. Prentice, Jr.

611

(13) **GREEN, STERLING STEFFEN**, 2323 Bowditch St., Berkeley, Cal. (Age 22. Born Omaha, Nebr.) 1931 B. S., Univ. of Cal. TT 4: P 4.—Feb. to Nov. 1928 Chainman, Bureau of Eng., Dept. of Public Works, Los Angeles.—May to Aug. 1929 Jun. Engr. Aid (Grade 1 b), and June to Aug. 1930 Civ. Engr. Aid (Grade 2), Div. of Highways, State of California,

being Chairman, Weighmaster, Inspector, Levelman, etc., on survey and construction work.—Dec. 1930 to Jan. 1931 Laborer (Special), Dept. of Water-Works and Supply, City of Los Angeles, being Asst. on party checking dams, elevated water tanks, etc. to determine safety, etc. *TT 4: P 4.* Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, S. T. Harding, B. Jameyson.

612

(4) GULICK, HAROLD VAN DYKE, 515 West Sixteenth St., New Cumberland, Pa. (Age 33. Born Brooklyn, N. Y.) 1919 B. S. in C. E., Union Coll. *TT 4: P 4.*—June 1919–Sept. 1920 Jun. Highway Engr., and April 1921–April 1923 Senior Highway Engr., Illinois Div. of Highways, Springfield, Ill., on design of culverts, slab and girder bridges, trusses, etc., checking, and designing skew trusses and span girder bridges, open and filled spandrel arches (single and multiple spans), piers, abutments, retaining walls, estimates, specifications, etc. *TT 2.5: SP 1: P 1.5: RC 1: D 1.5.*—Oct. 1920–March 1921 Draftsman, Bridge Office, Chicago, Milwaukee & St. Paul Ry., on design of retaining walls, grade separation work, station platforms, etc. *TT 0.2: SP 0.2.*—May 1923–Feb. 1926 Constr. Engr., American Locomotive Co., Schenectady, N. Y., being Res. Engr. in responsible charge of work on hammer shops, pipe lines, pump house, etc., and Supt. of Constr. in responsible charge of work by company forces on erection of two 750-h. p. boilers, transformer house, installation of foundations for and erection of two 3 000-kw. mixed-pressure turbinized, condensers and appurtenances, design of industrial buildings. *TT 2.6: SP 0.3: P 2.3: RC 1.8: D 0.5.*—March 1926 to date (except Jan. to April 1931 Designer, Hazen & Everett, New York City, on design and estimate of cost on large earth dam for City of Bogota, Colombia) with Gannett, Seelye & Fleming, Engrs., Inc., Harrisburg, Pa., as Constr. Supt., responsible to Constr. Mgr. for construction of three houses, remodeling office building, laying water mains, installation of gas holder and appurtenances, construction of 15-mile gas extension with holders and appurtenances and construction of dam and filter plant, estimated and bid approx. 20 projects for Company; design of dams, water and gas lines, filter plants, gas-storage tanks, etc. *TT 4.3: P 4.3: RC 3.3: D 1.*—*TT 13.6: SP 1.5: P 12.1: RC 6.1: D 3.* Refers to C. N. Bainbridge, N. S. Buckbee, G. F. Burch, W. H. Corddry, C. M. Everett, T. E. Seelye, W. C. Taylor, W. S. Todd, F. H. Weed.

613

(12) GUNDERSEN, THOMAS CHRISTIAN, Lakeview, Wash. (Age 22. Born Lakeview, Wash.) 1931 B. S. in C.-E., Univ. of Wash. *TT 4: P 4.* Refers to I. L. Collier, C. W. Harris, C. C. More, R. G. Tyler.

614

(9) GUNTER, RALPH HERMAN, 2344 Grinstead Drive, Louisville, Ky. (Age 30. Born Louisville, Ky.) 1931 B. S. in Civ. Eng., Univ. of Ky. *TT 4: P 4.*—1920 to 1922 Asst. Supt., Clay Chemical & Lumber Co., Clay County, Ky., in charge of cutting timber, logging, building tram roads and handling lumber. *TT 1: SP 1.*—1922 to 1927 Carpenter and Asst. Foreman on building construction for various contractors. *TT 2.5: SP 2.5.*—*TT 7.5: SP 3.5: P 4.* Refers to W. A. Newman, D. V. Terrell.

615

(12) GUSTAFSON, CARL LENNART, 4560 Fifty-fifth St. North East, Seattle, Wash. (Age 25. Born East Chicago, Ind.) 1931 B. S. in C. E., Univ. of Wash. *TT 4: P 4.* Refers to I. L. Collier, G. E. Hawthorn, C. C. More, R. G. Tyler.

616

(3) HABERER, JOHN CHARLES, D. & H. Student Camp, Ballston Spa, N. Y. (Age 21. Born Utica, N. Y.) 1931 C. E., Rens. Pol. Inst. *TT 4: P 4.* Refers to E. R. Cary, L. W. Clark, H. B. Compton, T. R. Lawson, W. W. Rousseau, H. O. Sharp.

617

(1) HABLEY, CHARLES GALLEY, 244 Riverside Drive, New York City. (Age 26. Born Chicago, Ill.) 1930 B. S., Mass. Inst. Tech. *TT 4: P 4.*—Aug. 1930 to date Field Engr., John H. French Co., New York City, being Asst. to Supt. of Constr. (building) (4 months). Asst. to Chf. Estimator (4 months) and at present Labor Foreman. *TT 0.8: P 0.8: RC 0.5.*—*TT 4.8: P 4.8: RC 0.5.* Refers to H. K. Barrows, C. B. Breed, W. M. Fife, J. W. Howard, C. M. Spofford.

618

(5) HAILE, ELMER RATHBUN, JR., Reckord Bldg., Towson, Md. (Age 21. Born Towson, Md.) 1931 B. E., Johns Hopkins Univ. *TT 4: P 4.*—Summers Rodman and Instrumentman with Fred H. Dollenberg, Towson, Md., on surveys and topography (1928 and 1929) and student, R. O. T. C. Camp, Engr. School, Ft. Humphreys, Va. (1930).—*TT 4: P 4.* Refers to T. F. Comber, Jr., J. H. Gregory, F. W. Medaugh, J. T. Thompson, W. W. Varney.

619

(2) **HALDANE, JOHN NAFFEL**, 36 Church St., Boston, Mass. (Age 26. Born Ayr, Ont., Canada.) 1930 B. S. E. (C. E.), Univ. of Mich. TT 4: P 4.—Sept. 1926 to Sept. 1927 Transitman on subdivision surveys in Clermont, Fla., and June 1928 to Feb. 1929 Chf. of Party on topographic survey of part of Wisconsin River and adjacent land for power development project in Necedah, Wis., for J. G. Haldane. TT 1.2: SP 0.5: P 0.7: RC 0.7.—Sept. 1930 to March 1931 Draftsman, Koppers Constr. Co., Pittsburgh, Pa., on steel work. TT 0.3: SP 0.3.—March 1931 to date Draftsman, New England Fuel & Transportation Co., Everett, Mass., on steel work, concrete construction and general plant engineering. TT 0.2: SP 0.2.—TT 5.7: SP 1: P 4.7: RC 0.7. Refers to J. H. Cissel, L. M. Gram, C. T. Johnston, L. C. Maugh, T. J. Mitchell, R. H. Sherlock.

620

(2) **HALET, HUSEYIN KENAN**, Cambridge, Mass. (Age 26. Born Istanbul, Turkey.) B. S., Turkish Coll., Istanbul, Turkey. 1931 M. S., Harvard Eng. School. TT 4: P 4.—July 1927 to Nov. 1929 with Swedish R. R. Constr. Co., Istanbul, Turkey, until May 1929 as Draftsman and Asst. Engr., then Technician and Surveyor. TT 1.5: SP 0.9: P 0.6.—TT 5.5: SP 0.9: P 4.6. Refers to G. M. Fair, A. Haertlein, L. J. Johnson.

621

(10) **HAMMACK, JAMES ALBERT, Jr.**, 946 East University Ave., Gainesville, Fla. (Age 21. Born Jackson, Miss.) 1931 B. S. in C. E., Univ. of Fla. TT 4: P 4.—June 1931 to date Rodman, Florida State Road Dept., acting as Instrumentman. TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4. Refers to C. C. Brown, P. L. Reed.

622

(8) **HAMMERSMITH, ROBERT CHARLES**, 204 South Maple St., Sycamore, Ill. (Age 22. Born Sycamore, Ill.) 1931 B. Sc. in Civ. Eng., Univ. of Ill. TT 4: P 4. Refers to H. E. Babbitt, J. J. Doland, W. C. Huntington, T. C. Shedd, J. Vawter.

623

(1) **HAMPTON, JOHN ALEXANDER**, 337 Central Ave., Lawrence, N. Y. (Age 23. Born Brooklyn, N. Y.) 1931 B. S. in Civ. Eng., Univ. of Ala. TT 4: P 4. Refers to G. J. Davis, Jr., D. C. A. du Plantier, S. C. Houser.

624

(1) **HANCOCK, CLARENCE COLES**, 224 Abbey House, Westminster, London, S. W. 1, England. (Age 43. Born Kilmersdon, Somersetshire.) 1904 to 1907 Articled Pupil with A. F. Long, Civ. Engr., Warminster, Wiltshire, on surveys, drawings, specifications, etc., and (last year) supervising road and water-works construction and laying of gas mains. TT 1.5: SP 1.5.—1907 to 1910 Asst. Engr. and Surveyor, Radstock Urban Dist. Council, on roads, sewers, water-works, etc., including responsibility for drawing office. TT 1.5: SP 1.5: D 1.—1910 to 1912 Engr. and Surveyor, Moorewood Colliery Co., Ltd., on surveys, railway siding and bridge construction. TT 1.5: P 1.5: RC 0.5.—1912 to 1921 Engr. and Surveyor to Warminster Rural Dist. Council, being Chf. Eng. Official responsible for preparation and carrying out of road-improvement schemes, water-works maintenance and construction, housing and sewerage; 1914 to 1920 also with Road Board and Ministry of Transport, being Res. Engr. for military camp road construction (over £100 000) in Wylve Valley area of Salisbury Plain. TT 9: P 9: RC 9: D 9.—1921 to 1923 Res. Engr., Durham County Council, being responsible for drawings, layout and construction of East Coast Road (about £300 000). TT 2: P 2: RC 2.—1923 to date Engr. for Roads and Public Works, Expanded Metal Co., Ltd., London, being Adviser on roads, bridges, sewers, etc.; since 1925 also in private practice as Road Engr. on schemes in various places. TT 6: P 6: D 6.—TT 21.5: SP 3: P 18.5: RC 11.5: D 16. Refers to R. F. Chapman, R. I. Weymouth. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

625

(1) **HARDY, GEORGE HENRY**, 39-55 Fifty-fifth St., Woodside, N. Y. (Age 24. Born Brooklyn, N. Y.) 1929 A. B., 1930 B. S. in Eng., and 1931 C. E., Columbia Univ. TT 4: P 4. Refers to A. H. Beyer, D. M. Burmister, J. K. Finch, W. J. Krefeld, C. R. Wyckoff.

626

(5) **HARRIS, ADOLPH MOSBY**, 2113 Stuart Ave., Richmond, Va. Graduating student awarded Virginia Section prize. (Age 24. Born Dumbarton, Va.) 1931 B. S. in Civ. Eng., Va. Pol. Inst. TT 4: P 4.—Sept. 1925 to March 1926 Draftsman, Virginia State Highway Comm., on construction plans. TT 0.2: SP 0.2: D 0.2.—March 1926 to Sept. 1927 Instrumentman, Bureau of Surveys, Dept. of Public Works, Richmond, Va., on surveys, construction and inspection. TT 0.8: SP 0.8: D 0.8.—TT 5: SP 1: P 4: D 1. Refers to R. B. H. Begg, F. J. Sette.

627

(11) **HARRIS, WALTER J.**, 1134 East Lexington Drive, Glendale, Cal. (Age 47. Born Delavan, Wis.) Registered Civ. Engr., State of California.—1910 A. B. in Civ. Eng., Stanford Univ. *TT 4: P 4.*—Autumn 1905 to spring 1907 Boatman, Chainman and Instrumentman with A. L. Sonderegger, Los Angeles, Cal., laying out Long Beach Harbor, soundings, tide readings, draw-bridge construction, etc. *TT 0.6: SP 0.6.*—March to Aug. 1907 Chainman, Instrumentman and Draftsman with Isaac Ford, on surveys. *TT 0.3: SP 0.3.*—Summer 1908 Instrumentman and Draftsman, Spring Valley Water Co., on surveys of dam and pipe line.—May 1910 to Oct. 1911 with Southern Pacific R. R., as Calculator and Instrumentman. *TT 0.7: SP 0.7.*—Oct. 1911 to Oct. 1912 Asst. Engr., Pajaro Valley Consolidated R. R. Co., Spreckels, Cal., on survey of lines, right-of-way, structures, maps, profiles, estimates, etc. *TT 1: P 1: RC 1.*—Oct. 1912 to March 1913 and Sept. 1913 to Jan. 1914 Draftsman with L. A. Bartlett, Pasadena, Cal., on subdivision, storm drains, street improvements. *TT 0.4: SP 0.4.*—March to Sept. 1913 Engr., Little Rock Power & Water Co., on survey of dam and reservoir site, Little Rock Creek, design and plans for 175-ft. gravity section dam, etc. *TT 0.5: P 0.5: RC 0.5: D 0.3.*—Jan. 1914 to Feb. 1915 Draftsman, Harbor Dept., Los Angeles, on plans and estimates for dredging, wharves, sheds, trestles, street improvements, etc. *TT 0.5: SP 0.5.*—Feb. 1915 to July 1917 with Road Dept., Los Angeles, as Sr. Draftsman on plans, estimates, specifications, roads, pavements and culverts, and Jun. Res. Engr. in charge of construction. *TT 1.8: SP 0.6: P 1.2: RC 1.2.*—July 1917 to March 1918 Asst. Engr. with Quinton, Code & Hill, Los Angeles, on survey of ranch (15 000 acres) and in charge of construction of ditches, canals, head gates, etc., for irrigation of 4 000 acres. *TT 0.8: P 0.8: RC 0.8.*—March 1918 to Feb. 1919 on North Island, San Diego, Cal., until Aug. 1918 as Field Engr. for Hampton Co., in charge of field parties on construction of buildings, firing range, pavement, sewers, water mains, etc., on Army end, and after Aug. 1918 Constr. Engr. for Lang & Bergstrom, San Diego, responsible for laying out dirigible balloon and seaplane hangars, barracks, hospital, etc., on Navy end. *TT 0.8: P 0.8: RC 0.8.*—Feb. 1919 to date with Road Dept., Los Angeles County, until July 1920 as Asst. Engr. and Jun. Civ. Engr., in charge of party on surveys, establishing street grades, etc.; July 1920 to July 1923 Jun. Civ. Engr., acting as Asst. Dist. Engr. in charge of construction of 5½ miles of concrete pavement from Ridge Route to Ventura County line, including grading, sand and rock-screening plant, other construction, maintenance, etc.; July 1923 to Nov. 1926 Civ. Engr., Grades 3 and 4, acting as Dist. Engr. and responsible for maintenance of culverts, bridges, dirt and paved roads in Road Foreman Dists. 401, 503 and 506-508, also location and construction of mountain roads necessitating use of dynamite for rock work, maintenance of camps, etc. (\$150 000 annually); since Nov. 1926 Civ. Engr., Grade 4, being Testing Engr. for Constr. Div., directing field research and studies of soils and insulating materials, grading concrete aggregates, studies of water-cement ratios, efficiency of curing methods, mechanical tampers, admixtures, strengths of cement and other factors affecting quality of pavements, writing specifications, etc. *TT 12.3: P 12.3: RC 12.3: D 3.5.—TT 23.7: SP 3.1: P 20.6: RC 16.6: D 3.8.* Refers to W. D. Armstrong, E. A. Burt, W. H. Code, A. Jones, G. W. Jones, H. M. Jones, F. H. Joyner, C. D. Marx, H. F. Pope.

628

(16) **HARRISON, ALBERT**, Princeton, Mo. (Age 22. Born Benton City, Mo.) 1931 B. S. in Civ. Eng., Mo. School of Mines. *TT 4: P 4.*—Summers 1929 and 1930 and May 1931 to date Rodman, Missouri State Highway Dept. *TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4.* Refers to C. E. Bardsley, J. B. Butler, E. W. Carlton, E. G. Harris, C. V. Mann.

629

(10) **HARRISON, EDGAR SCRUGGS**, Park Hotel, Chattanooga, Tenn. (Age 26. Born Benton, Tenn.) 1929 B. S. in C. E., Ga. School Tech. *TT 4: P 4.*—April 1923 to Aug. 1924, summers 1925 and 1926 and June 1927 to Aug. 1928 with Tennessee Elec. Power Co., Chattanooga, Tenn., until Aug. 1924 as Inspector, Materialman and Instrumentman on construction of steel tower transmission lines and substations, including some surveys, then on computations, drafting, etc., and after June 1927 Asst. to Eng. Party Chf. in charge of field execution and (6 months) in full charge of party, on surveys. *TT 1.9: SP 0.7: P 1.2.*—June 1929 to April 1931 with Allied Engrs. Inc., Blue Ridge, Ga., as Asst. Engr. (under Constr. Supt.) on construction of earth dam, in charge, as Unit Engr., of spillway unit, and in charge of preliminary investigations on proposed hydro development (75 000 h. p.), including 5-mile preliminary and location survey for tunnel, diamond drilling, topography, etc. *TT 1.8: P 1.8: RC 1.5.*—April 1931 to date with Tennessee Elec. Power Co., Chattanooga, in charge of party on surveys. *TT 0.3: P 0.3: RC 0.3.—TT 8: SP 0.7: P 7.3: RC 1.8.* Refers to R. P. Black, E. M. Burd, A. W. Crouch, F. C. Snow, N. F. Williams.

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(1) **HART, ROBERT WINSTON**, 369 St. John's Pl., Brooklyn, N. Y. (Age 23. Born Key West, Fla.) 1930 B. S. C. E., Univ. of Fla. TT 4: P 4.—Summers Surveyor with County Engr., Monroe County, Fla., level and transit work on highway and on timber bridge, computing earthwork (1927), Tracer with Supt. of Lighthouses, Seventh Dist., Key West, Fla. (1929), and Surveyor with C. C. Brown, Civ. Engr., Gainesville, Fla., on court house, customs house and post-office site, Key West, Fla.—Sept. 1930 to June 1931 graduate student in San. Eng., Univ. of Florida, being Asst. in Hydraulics and Surveying.—TT 4: P 4. Refers to C. C. Brown, W. W. Demeritt, H. B. Haskins, T. M. Lowe, P. L. Reed.

631

(3) **HARTLOFF, MARVIN SHELDON**, Big Tree Road, Hamburg, N. Y. (Age 23. Born Hamburg, N. Y.) 1931 C. E., Rens. Pol. Inst. TT 4: P 4. Refers to E. R. Cary, L. W. Clark, H. B. Compton, P. C. Ricketts, W. W. Rousseau, H. O. Sharp.

632

(4) **HARTUNG, LUTHER HAVERKOST**, 262 Cottage Ave., Tamaqua, Pa. (Age 24. Born Mahanoy City, Pa.) 1931 C. E., Rens. Pol. Inst. TT 4: P 4. Refers to L. W. Clark, T. R. Lawson, H. O. Sharp.

633

(1) **HASKELL, NELSON BURRITT**, 12 Orsini Drive, Larchmont, N. Y. (Age 21. Born Amherst, Mass.) 1931 B. S., Mass. Inst. Tech. TT 4: P 4. Refers to J. B. Babcock, 3d, C. M. Spofford.

634

(1) **HAUFLER, HERBERT ANDREW**, 123 Fourth St., Newark, N. J. (Age 31. Born Newark, N. J.) Licensed Highway Engr. and Surveyor, State of New Jersey. 1922 B. S. in Civ. Eng., and 1927 C. E., Cooper Inst. TT 4: P 4.—May 1922 to May 1923 Structural Draftsman, Hay Foundry & Iron Works, Newark, N. J., detailing beams and columns for office and mill buildings. TT 0.5: SP 0.5.—May 1923 to date with Essex County Eng. Dept., Newark, N. J., until Sept. 1924 as Transitman; Sept. 1924 to Nov. 1928 Second Asst. Engr., on surveys and design of highways, highway bridges and storm drainage systems, Nov. 1928 to Nov. 1929 Bridge Designer, highway bridges, and since Nov. 1929 Asst. Engr., designing highway bridges and culverts, pavements, storm sewers, etc.; since Jan. 1929 also Instructor in Surveying, Newark Technical School. TT 7.5: SP 0.8: P 6.7: RC 4.7: D 4.7.—TT 12: SP 1.3: P 10.7: RC 4.7: D 4.7. Refers to A. F. Eschenfelder, F. E. Foss, S. C. Hamilton, Jr., H. W. Hellmann, W. A. Stickel.

635

(5) **HAWKINS, CLARENCE MORTIMER**, 207 Ridge St., Charlottesville, Va. Graduating student awarded Virginia Section prize. (Age 21. Born Alexandria, Va.) 1931 B. S. in Eng., Univ. of Va. TT 4: P 4.—Summers 1926-1930 Rodman, Chainman, Levelman and Instrumentman with G. E. Garrett, Alexandria, Va., on subdivision and preliminary survey for dam (1926-1928), Chf. of Party and Instrumentman on boundary surveys (1928) and Chf. of Layout Party on mill construction (1929) for Lee H. Williamson, and Chf. of Layout Party on mill construction, E. I. DuPont de Nemours, Inc., including grading, sewers, water lines, building, machinery, etc. (1930).—TT 4: P 4. Refers to E. E. Barnard, J. L. Newcomb, A. J. Saville, L. H. Williamson, H. A. Yancey.

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(14) **HAWORTH, HAROLD LORENZ**, St. Joseph, Ill. (Age 25. Born St. Joseph, Ill.) 1931 B. S., Univ. of Ill. TT 4: P 4. Refers to J. S. Crandell, J. J. Doland, W. C. Huntington, C. C. Wiley.

637

(10) **HAYDEN, THOMAS JEFFERSON, Jr.**, 714 East Worthington Ave., Charlotte, N. C. (Age 25. Born Orangeburg, S. C.) 1927 B. S. in C. E., Clemson Agri. & Mech. Coll. TT 4: P 4.—June 1927 to April 1928 Structural Draftsman, Piedmont & Northern Ry. Co., on layout and design of reinforced concrete railway structures. TT 0.8: P 0.8: D 0.4.—April 1928 to Feb. 1930 Draftsman, Chemical Constr. Co., on layout of industrial buildings, steel and concrete design. TT 1.7: P 1.7: D 0.9.—March 1930 to date Draftsman, W. S. Lee Eng. Corporation, Charlotte, N. C., on hydro-electric developments. TT 1.4: P 1.4: D 0.3.—TT 7.9: P 7.9: D 1.6. Refers to E. L. Clarke, F. H. Cothran, W. T. Hopkins, W. S. Lee, W. S. Lee, Jr., H. W. Small, Jr.

638

(9) **HAYES, JOHN MARION**, Veedersburg, Ind. (Age 22. Born Wingate, Ind.) 1931 B. S. C. E., Purdue Univ. TT 4: P 4. Refers to S. C. Hollister, G. P. Springer, R. B. Wiley.

639

(15) **HEAD, VIRGIL JACK**, City Hall, Bryan, Tex. (Age 25. Born Brownfield, Tex.) 1928 B. S., Agri. and Mech. Coll. of Tex. TT 4: P 4.—1923 to 1924 Rodman with W. B.

Wells, surveying. *TT 0.5: SP 0.5.*—Summers 1925-1927 Instrumentman and Res. Engr., with F. E. Devlin, Cons. Engr., on sewerage and paving.—1928 to date City Engr., Bryan, Tex., in charge of paving, sewage, water-works extensions, storm-sewer installation, etc. *TT 3: P 3: RC 3: D 3.*—*TT 7.5: SP 0.5: P 7: RC 3: D 3.* Refers to J. T. L. McNew, F. S. Oldt, J. Rady, J. J. Richey, R. J. Windrow.

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(15) HENDERLITE, HARRY BENJAMIN, Louisiana Highway Comm., Baton Rouge, La. (Age 38. Born Atkins, Va.) 1915 B. S. in C. E., N. C. Coll. of Agri. and Eng. *TT 4: P 4.*—June 1915 to June 1917 Draftsman, Mosler Safe Co., Raleigh, N. C., in charge of design of reinforced concrete and manganese steel vaults for two banks. *TT 1: SP 1.*—July to Nov. 1917 Levelman, Transitman and Chf. of party, Carolina Power & Light Co., preliminary hydro-electric survey on Yadkin River, below Badin, running contours, taking river discharge, etc. *TT 0.5: P 0.5: RC 0.5.*—Nov. 1917 to Feb. 1918 Asst. Engr. with E. C. Derby, Burlington, N. C., on sheet asphalt construction (\$150 000), calculating, fixing and setting lines and grades on curb, gutter and streets, inspection, estimates, etc. *TT 0.1: P 0.1.*—Feb. 1918 to Aug. 1919 with 33d Engrs., U. S. Army, in United States and France, on grading, layout work, construction, etc., including hospitals, railways, engine terminals, railway yards, pumping plants, machine shops, timber pile covers, derricks, garbage destructors, sewage disposal, and water-supply systems with dams, reservoirs, distribution and fire lines, etc., for camps and hospitals, motor reception and erection parks, light and power lines, etc. (detailed statement given in application); attended Engr. Officers Training Camp at Angiers, R. F.; studied dock and harbor engineering at Royal Polytechnic Coll. of Scotland and steam power plants at Univ. of Glasgow, Glasgow. *TT 1.5: P 1.5: RC 0.5: D 0.5.*—Aug. 1919 to July 1925 with North Carolina State Highway Comm., plotting tracing, computing, etc., then Testing Engr. on sand, cement, rock and gravel and latter Asst. to State Highway Engr. in charge of auditing estimates and compiling Federal Aid vouchers, vise of contracts, etc., adjusting and computing defaulted contracts, opening bids and awarding contracts, preparing briefs on right-of-way cases, etc. *TT 5.9: P 5.9: RC 5.9.*—July to Dec. 1926 and Aug. 1927 to Feb. 1929 in private practice, first at Tampa, Fla., on subdivision layouts, sewers, water lines and paving, and after Aug. 1927 at Raleigh, N. C., as Consultant furnishing legal engineering services to contractors, investigations and reports to surety companies, etc. *TT 2: P 2: RC 2: D 0.5.*—Jan. 1926 to July 1927 Asst. City Mgr., Tampa, in charge of new water plant (\$2 500 000), water and sewer extensions, street paving (\$5 000 000), public buildings, hospital and auditorium (\$1 700 000), bridges (3 single-leaf bascule, \$1 200 000), etc. *TT 1.5: P 1.5: RC 1.5.*—March 1929 to date with Louisiana Highway Comm., Baton Rouge, La., until Sept. 1929 as Office Engr. in charge of plans and contracts, construction disbursements, allocation and collection of Federal Aid and flood damage, etc., and since Sept. 1929 State Highway Engr. in complete charge of administration, design, construction and maintenance of state highway system, including hard surfacing and bridges and expenditure of \$115 000 000 for completing main arteries, concrete, medium type asphalt and gravel highways (approx. 9 000 miles) ten bridges (\$400 000 to \$2 000 000 each) and approx. twenty bridges (\$100 000 to \$200 000 each). *TT 2.4: P 2.4: RC 2.4: D 1.9.*—*TT 18.9: SP 1.1: P 17.8: RC 12.8: D 2.9.* Refers to L. R. Ames, E. S. Brice, E. L. Erickson, W. S. Fallis, N. E. Lant, G. T. Macnab, C. L. Mann, A. P. Melton, G. Moncur, V. M. Peirce, W. C. Riddick, K. N. G. Saurbrey, R. E. Snowden, G. F. Syme, H. Tucker, D. Ulrich, H. A. Underwood, C. M. Upham.

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(12) HENDERSON, DAVID HENRY, 1903 Washington St., Boise, Idaho. (Age 36. Born Benton Harbor, Mich.) 1914 to 1920 Pilot, British Royal Flying Corps, in England and France, and with 4th Battalion, Canadian Expeditionary Forces.—1920 to 1931 with Bureau of Highways, Dept. of Public Works, Idaho, 2½ years as Inspector and Instrumentman, 4½ years Asst. Materials Engr. in charge of testing laboratory and instructing inspectors, and 3½ years Res. Engr. in direct charge of estimates, surveys and construction of highways, highway structures, etc. *TT 9.3: SP 1.4: P 7.9: RC 3.4.*—At present Sales Engr., R. Hardesty Mfg. Co., acting as Salesman for corrugated culvert and smooth welded pipe and irrigation supplies, contacting with County Engrs. and Irrigation Engrs., etc.—*TT 9.3: SP 1.4: P 7.9: RC 3.4.* Refers to G. N. Carter, H. W. Gregory, J. A. Murphy, F. H. Pickett, W. G. Sloan.

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(15) HENDERSON, ERNEST RAY, 3420 East Twenty-Eighth St., Bryan, Tex. (Age 25. Born Humphrey, Ark.) 1930 B. S. C. E., Univ. of Ark. and 1931 M. Sc. in Civ. Eng., Agri. & Mech. Coll. of Tex. *TT 4: P 4.*—Summers 1929 and 1930 Instrumentman, Arkansas Power & Light Co., Pine Bluff, Ark., setting stakes for power and gas lines.—May 1931 to date Plant Inspector, Texas Highway Dept., Bryan, Tex., on concrete paving job. *TT 0.1: SP 0.1.*—*TT 4.1: SP 0.1: P 4.* Refers to L. E. Grinter, J. T. L. McNew, T. A. Munson, J. J. Richey.

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(11) **HEPWORTH, CLARE**, 1541 West McKinley, Phoenix, Ariz. (Age 24. Born Burlington, Kans.) 1931 B. S. C. E., Univ. of Ariz. TT 4: P 4. Refers to E. S. Borgquist, F. C. Kelton, J. C. Park.

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(1) **HERTZ, ALBERT LESLIE**, Balboa, Canal Zone. (Age 33. Born Calmar, Iowa.) 1920 B. S. in C. E., Iowa State Coll. TT 4: P 4.—Aug. 1918 to Jan. 1920 and June 1920 to Jan. 1921 Instrumentman, Union Pacific R. R., acting as Transitman and Levelman on terminal construction, yard layouts, maintenance of way, etc. TT 1: SP 1.—Jan. 1921 to April 1924 with Iowa Highway Comm., Ames, Iowa, as Instrumentman on highway location, and after April 1923 Res. Engr. in charge of heavy grading, bridge and culvert construction. TT 2.1: SP 1.1: P 1: RC 1.—April 1924 to April 1925 with Illinois Dept. of Highways as Res. Engr. on concrete road construction and Party Chf. on highway location surveys. TT 1: P 1: RC 1.—April 1925 to Jan. 1928 on private business in Iowa.—Jan. 1928 to date with Southern Dist., Municipal Eng. Div., Panama Canal, first as Surveyor on surveys, maps, layouts and inspection of municipal construction work, and after Oct. 1928 Jun. Engr. on surveys, reports, designs, specifications, estimates and engineering supervision of municipal work on pipe lines, highway location and construction, retaining walls, bridges, etc. TT 3.2: SP 0.4: P 2.8: RC 2: D 1.—TT 11.3: SP 2.5: P 8.8: RC 4: D 1. Refers to B. J. Fletcher, W. B. Godfrey, L. B. Moore, A. Onderdonk, E. S. Randolph.

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(8) **HERWEG, ROBERT RUSSEL**, 1221 Third St., Peoria, Ill. (Age 25. Born Peoria, Ill.) 1931 B. S. in C. E., Univ. of Ill. TT 4: P 4.—Sept. 1927 to Sept. 1928 Rodman and Chainman with W. P. Backes, and summers 1929-1930 Transitman with W. W. Paape, both of Peoria, Ill. TT 0.5: SP 0.5.—TT 4.5: SP 0.5: P 4. Refers to J. J. Doland, W. C. Huntington, W. A. Oliver, T. C. Shedd, F. W. Stubbs, Jr.

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(13) **HESTER, JAMES TAYLOR**, 1460 Eighteenth Ave., San Francisco, Cal. (Age 24. Born Larkspur, Cal.) 1931 B. Sc., Univ. of Cal. TT 4: P 4. Refers to N. A. Eckart, J. B. Leonard.

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(1) **HEWETT, LOUIS FREEMAN**, 135 Broadview Ave., New Rochelle, N. Y. (Age 42. Born New York City.) Prof. Engr. and Land Surveyor, New York State. 1909 B. S. in C. E., N. Y. Univ. TT 4: P 4.—1909 to 1912 Steel Designer, Milliken Bros., Staten Island, N. Y. (1 year), Bridge Designer, Bridge Dept., Barge Canal Office (1½ years) and Steel Designer and Inspector, Bridge Dept., Queensborough Bridge (1½ years). TT 2.5: SP 0.5: P 2.—1912 to 1917 Engr., William J. Scanlan Co., on construction of a sea-wall at Edgemere, N. Y., one for Lynn-Nahant R. R. at Lynn, Mass., and one for Keansburg (N. J.) Lighthouse, etc. TT 4.5: P 4.5: RC 4.5.—1917 to date (except 1918 to Dec. 1919) Pres. and Chf. Engr., Fredburn Constr. Corporation, on design and construction of buildings and foundations (over \$50 000 000), including construction office buildings, hotels, apartment houses, etc. (12 to 20 stories); and (at present) foundations for Central Bldg., Brooklyn Public Library (\$1 100 000), Brooklyn Technical High School (\$3 500 000), and Route 109, Sec. 3 of subway for Board of Transportation (\$4 000 000); also Pres. and Chf. Engr., Thompson-Leopold Fredburn Eng. Co., Inc., Contrs., and Cape Ann Quarries, Inc., with quarries at Gloucester and Lanesville, Mass.; applicant has invented a new block pavement (patent pending). 1918 to Dec. 1919, about 1 year, as Civilian Engr., in charge of design and construction for Army Transport Service, Hoboken, N. J., and after June 1919 First Lieut., Engr. Corps, U. S. Army, at Camp Alexander. TT 14: P 14: RC 14: D 14.—TT 25: SP 0.5: P 24.5: RC 18.5: D 14. Refers to J. Feld, M. A. Lippman, J. Loewenstein, L. S. Moisseiff, A. I. Ralsman.

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(7) **HILL, ALBERT EDWARD**, R. R. No. 4, Markesan, Wis. (Age 21. Born Chicago, Ill.) 1931 B. S. C. E., Univ. of Ill. TT 4: P 4. Refers to E. E. Bauer, J. S. Crandell, J. J. Doland, W. C. Huntington, F. W. Stubbs, Jr., C. C. Willey.

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(3) **HILTON, DONALD CROSS**, D. & H. Eng. Camp, Ballston Spa, N. Y. (Age 21. Born Minneapolis, Minn.) 1931 C. E., Rens. Pol. Inst. TT 4: P 4. Refers to E. R. Cary, L. W. Clark, T. R. Lawson, W. W. Rousseau, H. O. Sharp.

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(4) **HIPPENSTIEL, FREDERICK RAYMOND**, 407 Pepper Rd., Jenkintown, Pa. (Age 24. Born Philadelphia, Pa.) 3½ years student in Eng., Drexel Inst. Evening School.—Sept. 1926 to date with The Reading Co., until Feb. 1927 as Inspector on concrete and steel, and Oct. 1927 to Sept. 1928 Inspector, Transitman and Levelman, Port Richmond grain elevator.

surveying, Port Richmond Terminal; Feb. to Oct. 1927 Levelman and Recorder on construction of Pier H, Port Richmond Terminal; Sept. 1928 to Feb. 1929 Transmittan and Recorder on construction of Freight House No. 3, Philadelphia, Pa.; Feb. to May 1929 and July 1929 to Jan. 1930 Draftsman and Chf. of party on surveying, Port Richmond Terminal; May to July 1929 Engr.-in-Chg., foundations for crane runway for H. A. Htner & Sons, Philadelphia; Jan. 1930 to Feb. 1931 Field Engr. on construction of Pier B, Port Richmond Terminal; since Feb. 1931 Chf. of Party on surveys. TT 4.5: SP 0.5: P 4: RC 0.2. Refers to J. L. Cozzens, W. H. Crawford, W. McCormick, B. A. Owen, W. K. Wyatt.

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(12) HITCHINGS, ALLEN, 539 Lake Washington Boulevard South, Seattle, Wash. (Age 34. Born Chicago, Ill.) 1919 B. S. in C. E., Univ. of Wash. TT 4: P 4.—Jan. 1926 to Jan. 1921 with Yakima County Drainage Office, 6 months as Draftsman, including 1 month on design, and 6 months in charge of field inspection. TT 1: P 1: RC 0.6: D 1.—Oct. 1921 to March 1922 Draftsman, State Highway Dept., on maps and computing quantities. TT 0.2: SP 0.2.—July 1922 to Jan. 1929 with City of Seattle, Wash., until March 1923 as Computer, March 1923 to Jan. 1924 Jun. Inspector on municipal improvements, mostly paving, Jan. 1924 to Jan. 1928 Instrumentman in charge of party, and after Jan. 1928 Structural Draftsman, designing, checking and detailing (under supervision) on bridges. TT 5.8: SP 0.8: P 5: RC 1: D 0.5.—Jan. to April 1929 Structural Designer with V. C. Suckow, Seattle. TT 0.3: P 0.3: RC 0.3: D 0.3.—April to Sept. 1929 in private practice as Surveyor and Constr. Foreman. TT 0.4: P 0.4: RC 0.4.—Sept. 1929 to May 1930 Structural Designer and Checker, 6 months with Light Dept., Tacoma, on hydro-electric power house, then with Jacobs & Ober, Seattle, on Aurora Ave. bridge approaches. TT 0.7: P 0.7: RC 0.7: D 0.7.—May 1930 to date Structural Designer, Port of Seattle. TT 0.8: P 0.8: RC 0.8: D 0.8.—TT 13.2: SP 1: P 12.2: RC 3.8: D 2.4. Refers to S. DeMoss, D. W. McMorris, F. W. Phipps, F. F. Weld, J. R. West.

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(11) HODGKINSON, NORMAN BATEMAN, 912 Summit Drive, South Pasadena, Cal. (Age 33. Born Emmetsburg, Iowa.) Registered Engr., State of California. 1917 to 1922 (total 3½ years) student, Coll. of Civ. Eng., Univ. of California. TT 1.5: P 1.5.—March to Sept. 1919 Chairman and Levelman, June 1920 to July 1921 Transitman, Draftsman and Res. Engr. on maintenance and repair of hydro-electric systems, and Aug. 1925 to Oct. 1926 Asst. Chf. Designing Engr. on penstock, penstock anchors, etc., for Balch Plant No. 1 (approx. 2 400-ft. head), all for San Joaquin Light & Power Corporation of Fresno, Cal. TT 2.3: SP 0.4: P 1.9: D 1.2.—June to Oct. 1922 Draftsman, Hammond Lumber Co., Samoa, Cal., drafting, calculations, paper locations, etc. TT 0.1: SP 0.1.—Oct. 1922 to May 1925 Draftsman and Office Engr. for Harmon S. Bonte, Civ. Engr., San Francisco, Cal., on investigation and design for irrigation, reclamation, water studies, land evaluations, hydro-electric developments and engineering reports. TT 2.6: SP 0.1: P 2.5: RC 1.5: D 0.5.—May to Aug. 1925 Designer for Shirley Baker, Civ. Engr., San Francisco, on enlargement of stadium, Stanford Univ. TT 0.2: P 0.2.—Oct. 1926 to Aug. 1927 with Feather River Power Co., San Francisco, as Designer of penstock anchors, etc., for Buck's Creek plant No. 1 (approx. 2 500 ft. head). TT 0.8: P 0.8: D 0.8.—Aug. 1927 to date Designing Engr., Asst. Chf. Designing Engr. and (since March 1930) Chf. Designing Engr., Los Angeles County Flood Control Dist., on hydraulic studies, investigation, supervision and design of dams, spillways, canals, gates, channel protection, spreading grounds, water-front development, etc., San Gabriel, Pacoima, Big Dalton, Big Tijuana No. 1, Puddingstone, Sunset Canyon and Sierra Madre dams and major channel developments on Los Angeles and San Gabriel Rivers; winters 1930 and 1931 (one class weekly) Lecturer in Hydraulics, School of Citizenship and Public Administration, Univ. of Southern California. TT 3.9: P 3.9: RC 2.6: D 3.6.—TT 11.4: SP 0.6: P 10.8: RC 4.1: D 6.3. Refers to H. S. Bonte, E. C. Eaton, S. M. Fisher, H. E. Hedger, F. A. Noetzli, C. E. Pearce, O. Speir.

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(14) HOGAN, BEN MILES, 5323 Edgewood Ave., Little Rock, Ark. (Age 31. Born West Plains, Mo.) 1921 B. S. in C. E., Univ. of Mo. TT 4: P 4.—May 1921 to date Constr. and Estimating Engr., Hogan Constr. Co., Little Rock, Ark., on highway construction in Prairie, Arkansas, Lincoln, Pulaski (Dist. No. 10, \$225 000) and Crittenden (\$400 000) Counties, Ark., and Eastland County, Tex.; grading, drainage and gravel surfacing (\$200 000) for Missouri Highway Dept. in Madison County, Mo., road surfacing in Texas and Florida (\$400 000 contracts) and road maintenance, Texas Highway Dept.; city paving and sewers (\$250 000), Bay St. Louis, Miss.; sewer (\$150 000) and paving (\$200 000), Helena, Ark., city paving, Texarkana, Batesville, Conway and Forrest City, Ark. (\$850 000), etc. TT 14: P 10: RC 10.—TT 14: P 14: RC 10. Refers to H. R. Carter, C. S. Christian, C. S. Constant, W. E. Ford, A. C. Galt, A. E. Heagler, D. A. MacCrea.

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(1) HOGAN, JOHN IGNATIUS LOYOLA, 54 Seventy-seventh St., Brooklyn, N. Y. (Age 48. Born Newark, N. J.) Aug. 1902 to Aug. 1904 Rodman, Central Ind. R. R. (over 8 months) and Commission on Additional Water Supply for New York City, Fishkill, N. Y. (2 months), and Rodman and Leveler, Long Island R. R. (over 1 year). *TT 1: SP 1.*—Aug. 1904 to July 1907 Rodman, Topographic Draftsman and Asst. Engr., Rapid Transit R. R. Comm. *TT 1.9: SP 1: P 0.9.*—July 1907 to Feb. 1914 Asst. Engr., Public Service Comm. (successors to R. T. R. R. Comm.), until 1910 in charge of parties on surveys for subways, about one year designing reinforced concrete and steel subways, then Sec. Engr. in charge of subway construction in Brooklyn, Manhattan and Bronx. *TT 6.6: P 6.6: RC 5.6: D 1.*—Feb. 1914 to July 1915 member of firm, Walton, Beer & Hogan, Engrs., New York City, in charge of subway contract for Contr., Richard Carver Co., Inc., general design of plant, decking, etc. *TT 1.4: P 1.4: RC 1: D 0.4.*—July to Oct. 1915 Gen. Foreman, F. H. Clement & Co., Philadelphia, Pa., on pipe lines, foundations, grading, etc. *TT 0.3: P 0.3: RC 0.3.*—Oct. 1915 to Oct. 1928 Engr., Bradley Contr. Co. and Allied Interests, and Cons. Engr., on examination of final estimate of five subway sections for contractors, etc., Engr.-in-Chg., Bayly Hipkins, Inc., 3d-tracking station work, etc., on raising of Myrtle Ave. Elevated, Broadway to Wyckoff Ave., Brooklyn, Plant Engr., New York Clay Products Co., Associate and Chf. Engr. for Stephen U. Hopkins, preparing subway bid, examining jobs, etc., removal of Tarrytown Arch and installation of steel syphon and 52-in. steel pipe line in connection with Hillview Reservoir for City of Yonkers, N. Y., removal of old Brooklyn Conduit, east of Ridgewood Pumping Station and erection of new conduit, Dept. of Water Supply (about \$700 000), installation of sewage-disposal plant for City of Allentown, Pa., in Klines Island, Lehigh River (about \$600 000), etc. *TT 13: P 13: RC 12.5: D 5.*—Oct. 1928 to date Chf. Engr., W. G. Triest Constr. Co., Inc., on construction 4-track subway on Jackson Ave. and Northern Blvd., Long Island City (about \$6 700 000) and (at present) on two sections of subway in Hillside Ave., Jamaica (about \$6 300 000) as Chf. Engr. for Triest Contr. Corporation. *TT 2.8: P 2.8: HC 2.2: D 0.3.*—*TT 27: SP 2: P 25: RC 21.6: D 2.2.* Refers to F. M. Beer, D. G. Edwards, E. G. Haines, F. R. Harris, H. B. Machen, G. H. Nolan, R. Ridgway, E. W. Robinson, C. D. Searle, W. G. Triest

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(2) HOLLEN, EDWARD JAMES, 16 Hazard Ave., Providence, R. I. (Age 44. Born Upper Troy, N. Y.) 1905 to 1909 Student in Civ. Eng., Brown Univ. *TT 1.5: P 1.5.*—1909 to 1910 and 1911 to 1912 Instrumentman and Subforeman, first with B. F. Smith Co., Bldg. Contrs., Pawtucket, R. I., on construction of mill buildings near Utica, N. Y. and after 1911 with C. S. Maguire Co., Providence, R. I., on construction of an estate in Newport, R. I. *TT 1: SP 1.*—1910 to 1911 Draftsman and Estimator for William Williams, Bldg. Contr., Providence, R. I., on building construction in Rhode Island and Massachusetts. *TT 0.5: SP 0.5.*—1912 Civ. Engr., American Thread Co., Willimantic, Conn., on survey and topographical map of plant and properties and preliminary design and estimate of two reinforced concrete 5-story factory buildings. *TT 0.5: P 0.5: RC 0.5: D 0.5.*—1913 Inspector Grand Trunk Ry. Co., on bridge construction in Rhode Island. *TT 0.2: SP 0.2.*—1913 to 1917 building contracting business in Providence, until 1915 as F. G. Kingston & Co., then as E. J. Hollen & Co., on construction of municipal, commercial, private and industrial buildings and reinforced concrete bridges in Rhode Island, design and construction of several industrial and commercial buildings, and engineering advice to architects. *TT 4.5: P 4.5: RC 4.5: D 4.5.*—1918 and 1920 to 1921 with Aberthaw Constr. Co., Boston and Fall River, Mass., 6 months as Asst. to Supt. of Constr. on ship building plant at Squantum, Mass. (\$15 000 000) and 1 year Supt. of Labor on construction of industrial buildings, etc. *TT 0.8: SP 0.8.*—1921 to 1925 Chf. Engr., Central Eng. & Constr. Co., Pawtucket, in charge of estimating, bidding, closing and directing (from office) operation of contracts, and design for industrial contracts, architectural and industrial buildings in New England. *TT 5: P 5: RC 5: D 1.*—1926 to date Executive Vice-Pres. and Mgr., Rowley Constr. Co., Pawtucket, in charge (except finance and field superintendence) on construction of general building work and design and construction of industrial building work in southern New England. *TT 5: P 5: RC 5: D 1.*—*TT 19: SP 2.5: P 16.5: RC 1.5: D 7.* Refers to N. D. Benson, H. W. Congdon, G. H. Henderson, I. W. Patterson, S. Wilmot.

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(14) HOLLENBECK, LEO EDWARD, 1711 North Jefferson Ave., St. Louis, Mo. (Age 23. Born St. Louis, Mo.) 1931 B. S. in C. E., Washington Univ. *TT 4: P 4.* Refers to E. O. Sweetser, J. L. Van Ornum.

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(12) HOLMES, WILLARD LEWIS, 1212 East Ninety-Fifth St., Seattle, Wash. (Age 31. Born Idaho Falls, Idaho.) $1\frac{1}{2}$ years student, Univ. of Washington and Cornell Univ.

(S. A. T. C.) *TT 0.5: P 0.5.*—Feb. to Aug. 1919, June 1920 to Feb. 1922 and April to Aug. 1922 Chainman, Rodman, Transitman and Inspector for Utah-Idaho Sugar Co., Idaho Falls, Idaho, Alaskan Eng. Comm. and others, on surveys, construction, railroad construction, etc. *TT 1.5: SP 1.2: P 0.3: RC 0.3.*—Sept. 1922 to May 1923 Draftsman, successively with C. H. Kiehl, Hubbell & Waller, Seattle, Wash., and Pulver Map Co., on maps and plans for drainage projects, highway maps, etc., and June to Sept. 1923 Transitman and Draftsman with Hubbell & Waller on surveys in southeastern Alaska. *TT 0.7: SP 0.2: P 0.5: RC 0.3.*—Oct. 1923 Designer and Draftsman with Ernest B. Hussey, Seattle, on design of crushing plant and alterations to Alaska Palladium Min. Co.'s mill. *TT 0.1: P 0.1: RC 0.1: D 0.1.*—Nov. 1923 to April 1925 and Jan. 1926 to March 1927 Draftsman (Prin. Asst.), successively with McKenna Lumber Co., and Greenwood Logging Co., on logging railroad location, topographic mapping, etc., being responsible for getting out all maps, plans, profiles, etc., also in charge of party on field work, including topographic mapping of timberland, devising methods to fit conditions, etc. *TT 2.7: P 2.7: RC 1.9.*—May to Dec. 1925 Draftsman and Estimator, Merced Irrigation Dist., drafting maps and plans, estimating quantities, reconstruction of Yosemite Valley R. R. *TT 0.7: P 0.7.*—April to July 1927 and Jan. 1928 to June 1929 Office Engr. with Gardner, Gardner & Fischer, Inc., Seattle; work included charge of drafting, computing, estimating and field work on real-estate subdivisions, construction on roads and water-supply system, etc. *TT 1.8: P 1.8: RC 1.7: D 0.5.*—Aug. to Dec. 1927 Draftsman and Transitman with Willis T. Batcheller, Inc., Seattle, on maps of damsite, part of reservoir, etc., in charge of field party on surveys, etc., on preliminary investigation of hydro-electric project, etc. *TT 0.4: P 0.4: RC 0.2.*—June 1929 to date Prin. Draftsman (Topographic), U. S. Engr. Office, Seattle, drafting maps for report on Stilaquamish River, Wash., designing and estimating dams, etc., for power and irrigation projects, including water-supply analyses. *TT 2.1: P 2.1.*—*TT 10.5: SP 1.4: P 9.1: RC 4.5: D 0.6.* Refers to H. J. M. Baker, A. J. Ela, A. J. Gilardi, R. W. Lincoln, G. L. Parker, T. W. Secrest.

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(8) **HOLMQUIST, HERBERT THEODORE**, 1442 North Lawler Ave., Chicago, Ill. (Age 27. Born Chicago, Ill.) 1931 B. S. in Civ. Eng., Univ. of Ill. *TT 4: P 4.*—Feb. to July 1923 Cost Clerk with Mr. Diersen, Chicago, Ill. *TT 0.2: SP 0.2.*—Sept. 1920 to Sept. 1921 Jun. Clerk, and Nov. 1923 to Sept. 1927 Elec. Draftsman, with E. C. Rowe, Chicago, office and field work on Commonwealth Edison Co. System, etc. *TT 2.5: SP 2.5.*—*TT 6.7: SP 2.7: P 4.* Refers to J. J. Doland, G. W. Pickels.

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(10) **HORAN, CHARLES RAYMOND**, Ocean Springs, Miss. (Age 31. Born Antioch, Ill.) Student, Lake Forest Coll. (Feb. 1919 to Feb. 1921), Univ. of Illinois (Sept. 1921 to June 1922 and Feb. 1923 to June 1924) and George Washington Univ. (Feb. to June 1926). *TT 1: P 1.*—Feb. to Sept. 1921 Rodman, Draftsman and Instrumentman on coal mine development, Melring Hicks & Co., Williamson, W. Va. *TT 0.2: SP 0.2.*—Sept. 1922 to Feb. 1923 Inspector on concrete highway construction and Asst. to Engr.-in-Chg., Lake County Highway Dept., Waukegan, Ill. *TT 0.5: P 0.5: RC 0.3.*—Sept. 1923 to June 1924 (while student) with City Engr., Champaign, Ill., as Inspector and Draftsman designing street surface and drainage system.—April to June 1925 Instrumentman and Ore Sampler, Comstock Merger Mines, Inc., Virginia City, Nev. *TT 0.3: P 0.3.*—July to Oct. 1925 Asst. Supt. with John E. Field, Denver, Colo., in charge of piping and grading golf course. *TT 0.3: P 0.3: RC 0.3.*—Oct. 1925 to Dec. 1926 Jun. Civ. Engr., Interstate Commerce Comm., Land Sec., Washington, D. C., computing and classifying land areas for railroad valuation. *TT 1.1: P 1.1.*—Dec. 1926 to Oct. 1929 with U. S. Navy Dept., Bureau of Yards and Docks, until April 1929 at U. S. Naval Station, Guantanamo Bay, Cuba, as Jun. Civ. Engr., being Asst. to Public Works Foreman and in charge of construction of two reinforced concrete piers, and after April 1929 at U. S. Naval Ammunition Depot, Hawthorne, Nev., in charge of outside station construction, small buildings, steel warehouse, etc., and exploration of damsite. *TT 2.9: P 2.9: RC 2.3: D 0.6.*—Oct. 1929 to date with Airways Div., U. S. Dept. of Commerce, as Jun. to Asst. Civ. Engr. constructing intermediate fields, selecting sites for Brownsville-Ft. Worth, El Paso-Ft. Worth, Tucson-El Paso and New Orleans-Atlanta Airways, involving design of field layout, selection of site, preparation of proposal and specifications, letting of contract, supervision and acceptance of work. *TT 1.7: P 1.7: RC 1.1: D 0.5.*—*TT 8: SP 0.2: P 7.8: RC 3: D 1.1.* Refers to G. R. Brooks, C. H. Cotter, J. E. Field, F. C. Hingsburg, C. M. Lightburn, F. C. Lohmann, C. C. Wiley.

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(16) **HOUCK, FRED ADAM**, Box 75, Gilman, Colo. Graduating student awarded Colorado Section prize. (Age 28. Born Leadville, Colo.) 1931 B. S. in C. E., Univ. of Colo. *TT 4: P 4.*—Summer 1927 Chainman with Platt & Kieff, Civ. and Min. Engrs., Leadville, Colo.—

June 1928 to Sept. 1929 and Summer 1930 Asst. Engr. and Engr., Empire Zinc Co., Gilman, Colo., on surveys, drafting, calculations, reports, inspection, investigation, geology, etc. *TT 0.7: SP 0.7.—TT 4.7: SP 0.7: P 4.* Refers to C. L. Eckel, E. W. Raeder.

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(12) **HOUGH, LAWRENCE EVERT**, Alderwood Manor, Wash. (Age 25. Born Kansas City, Mo.) 1931 B. S. in C. E., Univ. of Wash. *TT 4: P 4.*—Oct. 1926 to Sept. 1928 with U. S. Coast and Geodetic Survey, until June 1927 as Seaman, then Recorder of sextant angles, speed and course of vessel, soundings and monthly reports, and after June 1928 Topographic Rodman. *TT 0.7: SP 0.7.—TT 4.7: SP 0.7: P 4.* Refers to I. L. Collier, C. W. Harris, R. F. Luce, C. C. More, R. G. Tyler.

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(11) **HOUSHOLDER, VIC H.**, 1330 East Brill St., Phoenix, Ariz. (Age 39. Born Columbus, Kans.) Registered Civ. Engr., State of Arizona.—1915 A. B., and 1916 M. A. in Structural Geology, Univ. of Kans. *TT 2: P 2.*—1927 (3 months) post-graduate student in strength of materials and metallurgy in California.—March to June 1917 Geologist, Independent Oil Co. *TT 0.1: SP 0.1.*—June 1917 to May 1919 Btry. Comdr. 129th F. A. in A. E. F.—June 1919 to Feb. 1922 Res. Engr., Gila Water Co., made stakeout for and acted as Instrumentman, Checker and Inspector on Gillespie Dam, and had charge of construction of 42-mile main canal and distribution system, etc., for 85 000-acre project. *TT 2.7: P 2.7: RC 2.7.*—Feb. 1922 to March 1923 Res. Engr. in complete charge on Cave Creek Flood Control Dam (multiple curve faced, 1 800 ft. long, 150 ft. high, \$556 000), Phoenix, Ariz.; designed and supervised construction of special footings for buttresses. *TT 1.1: P 1.1: RC 1.1.*—March 1923 to Nov. 1927 Field Engr. for J. B. Girand, Cons. Engr., Phoenix, work included surveying dam and reservoir sites, making examination and report on an irrigation project, investigating and mapping power field for a large hydro-electric project in Arizona, surveying mining claims, etc., also 9 months Supt. of a mine. *TT 4.7: P 4.7: RC 4.7.*—Nov. 1927 to date Sales Engr., California Corrugated Culvert Co., Los Angeles and West Berkeley, Cal. *TT 3.7: P 3.7: RC 3.5: D 1.—TT 14.3: SP 0.1: P 14.2: RC 12: D 1.* Refers to J. W. B. Blackman, W. A. Farish, J. B. Girand, C. E. Griggs, W. W. Lane, H. S. Reed.

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(12) **HOUSTON, LAWRENCE ANDREW**, Route 2, Enumclaw, Wash. (Age 24. Born Benedict, Nebr.) 1931 B. S. in C. E., Univ. of Wash. *TT 4: P 4.* Refers to I. L. Collier, G. E. Hawthorn, C. C. May, J. W. Miller, C. C. More, R. G. Tyler.

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(11) **HOUSTON, ROBERT LOCHARD**, 338 North First Ave., Tucson, Ariz. (Age 22. Born High Falls, Wis.) 1931 B. S. in Civ. Eng., Univ. of Ariz. *TT 4: P 4.* Refers to E. S. Borgquist, F. C. Kelton, J. C. Park.

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(8) **HUDSON, HERBERT EDSON, Jr.**, 6932 Olcott Ave., Chicago, Ill. (Age 20. Born Chicago, Ill.) 1931 B. S. in C. E., Univ. of Ill. *TT 4: P 4.*—April to May 1928 Consultant, Village of Rantoul, Ill., on investigation of stream pollution.—*TT 4: P 4.* Refers to H. E. Babbitt, H. E. Hudson, W. C. Huntington, J. Vawter.

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(14) **HUEBNER, JOHN BRADY**, 708 McCall Bldg., Memphis, Tenn. (Age 24. Born St. Louis, Mo.) 1931 B. S. in Civ. Eng., Mo. School of Mines. *TT 4: P 4.*—May 1928 to Sept. 1929, Summer 1930 and Feb. 1931 to date Surveyman, U. S. Engrs., Memphis Dist., surveying, computing, drafting, discharge observations and river work. *TT 1.5: P 1.5.—TT 5.5: P 5.5.* Refers to C. E. Bardsley, J. B. Butler, E. W. Carlton, E. G. Harris, B. A. Ross.

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(12) **HUGILL, HARRY STANLEY**, Route No. 1, Hubbard, Ore. (Age 22. Born Portland, Ore.) 1930 B. S. in C. E., Ore. State Agri. Coll. *TT 4: P 4.* Refers to J. R. Griffith, C. A. Mockmore, H. S. Rogers.

668

(11) **HUNTER, HUBERT SHIPLEY**, Route 1, Box 199 A, Phoenix, Ariz. (Age 20. Born Tucson, Ariz.) 1931 B. S. in C. E., Univ. of Ariz. *TT 4: P 4.*—Summer 1930 Highway Engr., Div. of Management, on unit costs, time efficiency of oil and concrete highways, and June 1931 to date Chainman, testing oils and keeping records of oil roads, with U. S. Bureau of Public Roads. *TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4.* Refers to E. S. Borgquist, F. C. Kelton, C. Myers, J. C. Park.

669

(8) **HURLBUTT, ROBERT HAMILTON**, 416 North West Sixth Ave., Galva, Ill. (Age 21. Born Burns Township, Ill.) 1930 C. E., and 1931 M. C. E., Rens. Pol. Inst. *TT 4: P 4.* Refers to L. W. Clark, H. B. Compton, T. R. Lawson.

670
(8) HURST, ERNEST GERALD, 814 Langdon Ave., Alton, Ill. Graduating student awarded Illinois Section prize. (Age 23. Born Pana, Ill.) 1931 B. S.; Rose Pol. Inst. TT 4: P 4. Refers to R. E. Hutchins, R. L. McCormick.

671
(16) HUTTON, KENT MAX, 205 West Main St., Florence, Colo. (Age 24. Born Florence, Colo.) 1931 B. S. in C. E., Univ. of Colo. TT 4: P 4. Refers to C. L. Eckel, W. H. Thoman.

672
(9) IVERS, WILLIAM JOSEPH, 4325 Whetsel Ave., Cincinnati, Ohio. (Age 24. Born Pike County, Ohio.) 1931 C. E., Univ. of Cin. TT 4: P 4.—May 1927 to June 1931 (co-operative work) Jun. Eng. Aid, and June 1931 to date Jun. Structural Engr., Highway Dept., Cincinnati, acting as Rodman, Chairman and Instrumentman (April 1928 to Jan. 1930) and (since Jan. 1930) drafting, estimating and designing reinforced concrete and steel bridges, walls, underpasses, stairs, etc. TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4. Refers to H. H. Kranz, H. B. Luther, H. F. Shipley.

673
(5) JACKSON, SHERMAN KEITH, 1222 New Hampshire Ave. N. W., Washington, D. C. (Age 23. Born Holton, Kans.) 1930 B. S. in Civ. Eng., Kans. State Agri. Coll. TT 4: P 4.—June 1928 to Sept. 1929 Chairman, Rodman and Jun. Instrumentman, M. of W. Dept., Rock Island Lines. TT 0.6: SP 0.6.—Aug. 1930 to March 1931 Jun. Testing Engr., Bureau of Materials, Illinois Dept. of Highways, on inspecting and testing road-building materials. TT 0.3: SP 0.3.—April 1931 to date Jun. Hydr. Engr., U. S. Geological Survey. TT 0.1: SP 0.1.—TT 5: SP 1: P 4. Refers to L. E. Conrad, F. F. Frazier, M. W. Furr, N. C. Grover, H. F. Hill, Jr., J. C. Hoyt, C. G. Paulsen.

674
(6) JACOBS, ROY KENNETH, 1439 Elm St., Youngstown, Ohio. (Age 22. Born Continental, Ohio.) 1931 B. S. in C. E., Ohio Northern Univ. TT 4: P 4.—June 1931 to date Draftsman, Truscon Steel Co.—TT 4: P 4. Refers to G. H. Elbin, A. R. Webb.

675
(9) JAFFARI, MEERZA AFSHAR, 516 South Simon St., Ada, Ohio. (Age 30. Born Rizialeh, Persia.) 1931 B. S. in C. E., Ohio Northern Univ. TT 4: P 4. Refers to G. H. Elbin, A. R. Webb.

676
(15) JANSSEN, JAMES SANDER, 1903 Short St., New Orleans, La. (Age 23. Born New Orleans, La.) 1931 B. E. in Civ. Eng., Tulane Univ. TT 4: P 4. Refers to D. Derickson, W. B. Gregory, F. A. Muth.

677
(12) JANSSEN, THEODORE ARMIN, 2116 E. Union St., Seattle, Wash. (Age 24. Born Denver, Idaho.) 1931 B. S. in C. E., Univ. of Wash. TT 4: P 4.—Summer 1929 Computer, Eng. Dept., City of Seattle, assessments on street improvements.—TT 4: P 4. Refers to C. C. May, J. W. Miller, C. C. More, R. G. Tyler.

678
(3) JELLEY, JOSEPH FRANKLIN, Jr., 1991 Fifteenth St., Troy, N. Y. (Age 27. Born Phoenixville, Pa.) 1931 C. E., Rens. Pol. Inst. TT 4: P 4.—July 1923 to date with U. S. Navy, until June 1927 as Midshipman at U. S. Naval Acad., Annapolis, Md., including 9 months sea duty with Practice Squadron; June 1927 to June 1930 Ensign, until June 1929 with U. S. S. Arkansas, aviation training (3 months), Communication Dept. (radio) (5 months), Officer of Watch (communication) and in charge of division personnel, Eng. Dept. (1½ years), Officer of Watch (engine room), repair and overhaul of distilling and refrigerating plants and boiler rooms, ship engineering records and reports, and after June 1929 at Postgraduate School, U. S. Naval Acad., Annapolis; since July 1930 Lieut. (j.g.), Civ. Eng. Corps. TT 2: P 2.—TT 6: P 6. Refers to E. R. Cary, T. R. Lawson.

679
(8) JOHANSEN, RALPH STEVENSON, 158 Bertling Lane, Winnetka, Ill. (Age 22. Born Bloomington, Ill.) 1931 B. S. in Civ. Eng., Univ. of Ill. TT 4: P 4.—Summer 1929 Field Checker and Draftsman, Public Service Co. of Northern Illinois.—TT 4: P 4. Refers to J. J. Doland, W. C. Huntington, G. W. Pickels, T. C. Shedd, J. Vawter.

680
(16) JOHNSON, ARTHUR ALVIN, Moline, Kans. (Age 30. Born Cleveland, Ohio.) Sept. 1919 to May 1921 student, Case School of Applied Science. TT 1: P 1.—June 1921 to July 1923 and Oct. 1924 to Feb. 1927 with Ohio Public Service Co., Cleveland, Ohio, until May 1922 as Transmittan on high-voltage transmission lines, May to Nov. 1922 Draftsman computing and plotting notes, Nov. 1922 to July 1923 Transmittan and Draftsman laying out tower lines and designing special towers for railroad crossings, etc., Oct. 1924 to May 1926

Surveyor in charge of field party on surveys and designing and inspecting high-voltage transmission lines, and after May 1926 Asst. Engr. on 2 miles of subaqueous foundations of reinforced concrete for tower line. *TT 2.7: SP 1.7: P 1: RC 0.4: D 0.7.*—July 1923 to Jan. 1924 Draftsman, U. S. Reclamation Service, Spokane, Wash., on proposed Columbia Basin irrigation project. *TT 0.3: SP 0.3.*—Jan. to April 1924 Draftsman, U. S. Forest Service, Portland, Ore., topographical drafting. *TT 0.2: SP 0.2.*—April to Oct. 1924 Computer and Draftsman, New Mexico State Highway Dept., Santa Fe, N. Mex. *TT 0.2: SP 0.2.*—Feb. 1927 to date with Solvay Process Co., Moline, Kans., until Dec. 1928 as Engr. in charge of power line, track and general surveys and drafting, and since Dec. 1928 Asst. Supt. in charge of all outside work, including laying out and designing pumping and washing plant. *TT 3.7: SP 0.3: P 3.4: RC 2.7: D 0.6.*—*TT 8: SP 2.6: P 5.4: RC 3.1: D 1.3.* Refers to R. D. Finney, H. J. Gault, H. A. Pearce, F. L. Plummer, F. W. Stephens.

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(8) **JOHNSON, ELDON ALFRED**, 837 East Eighty-sixth St., Chicago, Ill. Graduating student awarded Illinois Section prize. (Age 23. Born Chicago, Ill.) 1931 B. S. in C. E., Armour Inst. Tech. *TT 4: P 4.* Refers to J. F. Mangold, R. L. Stevens.

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(11) **JOHNSON, TOM ROYSE**, Benson, Ariz. (Age 25. Born Muskogee, Okla.) 1929 B. S. in Civ. Eng., Univ. of Ariz. *TT 4: P 4.*—Nov. 1924 to Oct. 1925, and Dec. 1928 to Jan. 1931 with City of Tucson, Ariz., until Oct. 1925 as Chairman, Dec. 1928 to June 1929 (while student) Draftsman, mapping water-lines, water-flow computations, etc., June 1929 to Oct. 1930 Office Engr., Water Dept., on design, specifications, distribution system layout and tests, cost estimating, etc., and after Oct. 1930 Shop Foreman, directing and supervising repairs to pump, machinery, vehicles, water-works equipment, including meters, etc., and responsible for buying for city. *TT 2.1: SP 0.5: P 1.6: RC 1.6: D 0.3.*—Feb. 1926 to Oct. 1927 (1 year, while student) Transitman, Pima County (Ariz.) Highway Dept., on road location, irrigation and land surveys, etc. *TT 0.3: SP 0.3.*—May to Sept. 1928 Transitman, Salt River Valley Water User's Association, Phoenix, Ariz., on power-line location.—Feb. 1931 to date Draftsman, Arizona State Highway Dept., on earthwork computations, structural reports, drafting, etc. *TT 0.2: SP 0.2.*—*TT 6.6: SP 1: P 5.6: RC 1.6: D 0.3.* Refers to E. S. Borgquist, G. T. Grove, F. C. Kelton, G. E. P. Smith, N. T. Veatch, Jr.

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(7) **JOHNSON, WENDELL EUGENE**, Austin, Minn. Graduating Student awarded Northwestern Section prize. (Age 20. Born Minneapolis, Minn.) 1931 B. C. E., Univ. of Minn. *TT 4: P 4.*—June 1931 to date Officerman, Minnesota State Highway Dept. *TT 0.1: SP 0.1.*—*TT 4.1: SP 0.1: P 4.* Refers to F. Bass, A. S. Cutler.

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(1) **JONES, DONALD HERBERT**, 143-33 Madison Ave., Flushing, N. Y. (Age 25. Born Goffstown, N. H.) 1925 to date student, School of Eng. and Arch., Columbia Univ. Extension.—1924 to 1926 Draftsman, J. J. Newberry Co., New York City making sketches and final drawings of small commercial buildings. *TT 1: SP 1.*—1926 to 1929 Designer and Estimator, State Contr. Co., designing steel, supporting footings and preparing estimates for industrial buildings (one and two stories), also acting as Asst. Supt. *TT 2.5: SP 0.5: P 2.*—1929 to date Designer (Steel and Concrete), New York & Queens Light & Power Co., general commercial work, including specification writing. *TT 2: P 2.*—*TT 5.5: SP 1.5: P 4.* Refers to D. M. Burmister, G. J. Gutekunst, W. J. Krefeld, W. A. Melny, W. H. Walker.

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(10) **JONES, RALPH KELLY**, 623 Cascade Ave. S. W., Atlanta, Ga. (Age 25. Born Mansfield, Ga.) 1926 B. S. C. E., Univ. of Ga. *TT 4: P 4.*—July 1926 to date (except Dec. 1928 to April 1930 with New Jersey State Highway Dept., on tests of 202-ft. concrete arch) Bridge Draftsman, Georgia State Highway Dept., on bridge design and on tests of 160-ft. concrete arch. *TT 4.2: SP 0.5: P 3.7: D 2.2.*—*TT 8.2: SP 0.5: P 7.7: D 2.2.* Refers to M. Goodkind, C. A. Marmelstein, E. N. Seymour, S. B. Slack, C. M. Strahan.

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(4) **JORDAN, ALBERT FREDRICK**, 1621 Cloverleaf St., Bethlehem, Pa. (Age 30. Born Lawrence, Mass.) 1923 B. S. in C. E., Drexel Inst. *TT 4: P 4.*—June 1923 to date with McClintic-Marshall Corporation, until Dec. 1923 in Bridge Shop, at Pottstown, Pa., fitting up and assembling steel bridges and buildings; Dec. 1923 to Nov. 1924 Draftsman at Carnegie, Pa., detailing steel manufacturing and mill buildings, etc.; Nov. 1924 to Nov. 1927 Estimator and Designer in Eng. Dept., Pittsburgh, on quantity estimates of steelwork for office, mill and manufacturing buildings, etc., and design of mill buildings, small bridges, bins, etc.; Nov. 1927 to March 1931 Asst. Engr., Eng. Dept., Pittsburgh, and since March 1931 Cost Estimator at Bethlehem, Pa., making cost estimates and preparing information

for bidding of structural steel, etc., for bridges, buildings, etc. TT 7.7: SP 0.2: P 7.5: RC 6.3: D 2.3.—TT 11.7: SP 0.2: P 11.5: RC 6.3: D 2.3. Refers to E. F. Ball, P. A. Franklin, J. Jones, M. den H. Kolyn, R. MacMinn, G. L. Taylor.

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(1) JOSEPH, LOUIS SIMMONDS, 2541 Whitney St., Astoria, N. Y. (Age 30. Born Manchester, England.) Professional Civ. Engr., State of New York. 1928 B. S., Coll. of City of N. Y., 2½ years (2 yrs. nights) student, School of Archt., Columbia Univ. TT 4: P 4.—Summer 1918 Tide Recorder, U. S. Army Engrs.—April 1924 to March 1925 Eng. Draftsman for various clients on large topographic maps, small house designs, patent drawings, etc. TT 1: P 1: RC 1: D 1.—March 1925 to March 1931 with Board of Transportation, City of New York, until Nov. 1925 as Eng. Asst., laying base lines, surface topography, map making, etc., greater part of time on plans for restoration and relocation of subsurface structures along line of rapid transit subway construction; after Nov. 1925 Jun. Engr., about six months on plans for restoration and relocation of subsurface structures; May 1926 to March 1928 Squad Boss, preparing plans and checking work, making investigations, reports, estimates, etc. and last 3 years Asst.-in-Chg., Subsurface Office, Second Div., supervising four squads of men, also on executive work including negotiations with Public Utility Companies, co-operation with Designs Divs. and with field engineers, etc. (office covered sub-surface work for over 20 miles of subway). TT 6: P 6: RC 5.8: D 5.8.—March 1931 to date Engr., Marcus Contr. Co., Inc., Brooklyn, N. Y., being Asst. to Chf. Engr., making studies of various construction problems, such as gas-bypass, methods of excavation and ramp locations, decking systems, sheeting and bracing methods, etc., on construction of rapid transit subway (1¼ miles about \$5 000 000) on Lafayette and Marcy Aves., Brooklyn, also in charge of plans for design of underpinning of about three hundred buildings (estimated cost over \$300 000). TT 0.3: P 0.3: RC 0.3: D 0.3.—TT 11.3: P 11.3: RC 7.1: D 7.1. Refers to H. J. Alexander, S. T. Goldsmith, H. Holbrook, H. W. Lesh, J. H. Myers, D. M. Zwanziger.

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(9) JOSLIN, JOHN GRANT, 65 Thirteenth Ave., Columbus, Ohio. (Age 22. Born Conneaut, Ohio.) 1931 B. C. E., Ohio State Univ. TT 4: P 4. Refers to R. A. Allton, E. F. Coddington, R. R. Litehiser, C. T. Morris, J. C. Prior, C. E. Sherman, R. C. Sloane.

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(8) KATZ, ABRAHAM AARON, 817 North Oakley Blvd., Chicago, Ill. (Age 28. Born Ekaterinoslav, Russia.) 1931 B. S., Univ. of Ill. TT 4: P 4.—Summer 1930 with Illinois Div. of Highways, Elgin, Ill.—TT 4: P 4. Refers to H. E. Babbitt, J. S. Crandell, J. J. Doland, W. C. Huntington, W. A. Oliver, G. W. Pickels.

690

(12) KELLEY, CHARLES CLARENCE, 119 South Fifth St., Klamath Falls, Ore. (Age 47. Born St. Elmo, Ill.) July 1907 to Sept. 1911 Transmittan, Res. Engr. and Asst. Engr., Southern Pacific Co. of Mexico, on construction (600 miles), grading, tunnels, bridges and track. TT 3.6: SP 0.6: P 3: RC 3.—April 1912 to Sept. 1913 Res. Engr. and Supt. of Constr., Oregon Elec. Ry. (Hill Lines), on construction (75 miles), grading, special track installation through city streets and roadbed drainage. TT 1.5: P 1.5: RC 1.5.—Oct. 1913 to Sept. 1917 Div. Engr., and Sept. 1919 to Dec. 1925 Div. Engr. and Asst. State Highway Engr., Oregon State Highway Comm., until 1920 in charge of highway work in a district (8 counties), including plans for improvements and supervision of construction and maintenance (approx. \$5 000 000 annually), then in charge of all location, maintenance and construction in state (approx. \$18 000 000 annually). TT 10.3: P 10.3: RC 10.3: D 10.3.—Oct. 1917 to Aug. 1919 First Lieut. and Capt., Engrs., A. E. F., U. S. Army, on construction and operation of railroads, saw-mills and timber operations and construction and maintenance of highways, in command of engineering troops in advanced section of supply service, A. E. F. TT 1.8: P 1.8: RC 1.8.—Dec. 1927 to Dec. 1930 Cons. Civ. Engr. and City Engr. of Klamath Falls, Ore., on design and construction of pavements, sewers and sewage works, airports, park projects, etc. TT 3.1: P 3.1: RC 3.1: D 3.1.—Jan. 1926 to Nov. 1927 and Jan. 1931 to date Cons. Civ. Engr., at Klamath Falls, on cadastral and topographic surveys, location and construction of logging railroads and appurtenances, design and supervision of various engineering projects, etc. TT 2.4: P 2.4: RC 2.4: D 2.4.—TT 22.7: SP 0.6: P 22.1: RC 22.1: D 15.8. Refers to J. F. Clarkson, L. Griswold, R. F. Hoffmark, O. Laurgaard, S. Murray.

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(9) KERR, GEORGE WATSON, 307 Trust Bldg., Newark, Ohio. (Age 28. Born Pittsburgh, Pa.) 4 years student in Civ. Eng., Ohio State Univ. TT 2: P 2.—Summers 1921 and 1923 Rodman on surveys, successively with R. A. Kern, Little Rock, Ark., and Corps of Engrs., U. S. Army.—Oct. 1926 to Jan. 1928 Concrete Supervisor, Chesapeake & Ohio R. R., on construction, being Engr.-Inspector for a series of structures TT 1.2: P 1.2: RC 1.2.—March

1928 to April 1931 Asst. Engr., and at present Asst. Materials Engr., Ohio Div. of Highways, on construction, designing concrete mixes, supervising field tests, reviewing materials used in Div. 5 (7 counties), etc. *TT 3.1: P 3.1: RC 3.1.—TT 6.3: P 6.3: RC 4.3.* Refers to E. C. Blosser, J. H. Herron, W. L. Leach, R. R. Litehiser, C. H. Lovejoy.

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(8) **KESSLER, WARREN LEONARD**, 314 St. Mary St., Pekin, Ill. (Age 25. Born Pekin, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.*—April to Sept. 1927 Chainman, Atchison, Topeka & Santa Fe R. R.—June 1929 to date (while student) Office Engr., The L. E. Myers Co., Chicago, Ill.—*TT 4: P 4.* Refers to J. J. Doland, W. C. Huntington, G. W. Pickels, T. C. Shedd, C. C. Wiley.

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(8) **KETCHUM, MILO SMITH, JR.**, 1114 West California Ave., Urbana, Ill. Graduating student awarded Central Illinois Section prize. (Age 21. Born Denver, Colo.) 1931 B. S. in C. E., Univ. of Ill. *TT 4: P 4.*—Summers 1929 and 1930 with U. S. Bureau of Public Roads successively as Rodman and Acting Transitman, road relocation, Shoshone National Forest, Wyo., and Student Engr., concrete research studies, Div. of Management, Sheboygan, Wis.—*TT 4: P 4.* Refers to J. J. Doland, W. C. Huntington.

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(8) **KETTENHOFEN, ARTHUR PETER**, 427 Liberty St., Aurora, Ill. (Age 22. Born Aurora, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.* Refers to H. E. Babbitt, W. C. Huntington.

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(15) **KIDD, JEFFERSON ERNEST**, 112 DeSota St., Alexandria, La. (Age 29. Born Ruston, La.) Registered C. E., State of Louisiana. 1924 B. S. in C. E., and 1929 C. E., Ga. School Tech. *TT 4: P 4.*—July 1924 to date with Louisiana Highway Comm., until Oct. 1925 as Asst. Maintenance Supt. on gravel, asphalt and concrete roads, bridge repairs, drainage problems, etc., Oct. 1925 to Oct. 1926 Dist. Maintenance Supt. in responsible charge of maintenance of 700 miles of similar roads, surfacing, culverts, bridges, and drainage canals, and since Oct. 1926 Res. Engr., Bridge Dept., in responsible charge of location and construction of concrete, steel and timber bridges. *TT 7: P 7: RC 5.5.—TT 11: P 11: RC 5.5.* Refers to E. L. Erickson, N. E. Lant, W. H. Myhand, E. E. Shutts, J. R. Wendt, Sr.

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(12) **KIELY, JOHN ROCHE**, 1104 North Steele St., Tacoma, Wash. (Age 24. Born Berkeley, Cal.) 1931 B. S. in C. E., Univ. of Wash. *TT 4: P 4.*—July to Nov. 1926 Rodman and Draftsman, assisted on estimates, inspection, etc., and Nov. 1926 to Oct. 1927 Instrumentman and Estimator on construction of pulp mill and Plant Engr. during operation under A. J. Bennett, Shelton, Wash. *TT 0.6: SP 0.6.*—Feb. to June 1928 (while student) Steel Detailer on reinforced concrete construction, apartment buildings, garages, etc., W. H. Witt & Co.—Summer 1928 Instrumentman on mapping, triangulation survey for tramway, extension of highway for park service, under R. Waterhouse, Longmire, Wash.—Jan. to June 1929 (while student) Draftsman, Shell Oil Co., on plant maps, checking deeds and reinforced concrete design, etc.—Summer 1929 Engr. on construction and design of addition (\$150 000) to Rainier Pulp & Paper Co., designed and supervised construction of reinforced concrete building and tanks (\$100 000), wood structures, foundations, etc. (\$50 000) (all under supervision of Chf. Engr.) *TT 0.1: SP 0.1.*—Oct. 1929 to July 1930 with Olympic Forest Products Co., until Feb. 1930 as Designer, designing and detailing warehouse (\$45 000), chip-storage building (\$70 000), miscellaneous timber, concrete and steel design, piping layouts, etc., and after Feb. 1930 Asst. Res. Engr. on construction of same work, also miscellaneous hydraulic design, 40-in. pump line and fittings, specifications for tower foundations and timber trusses for pulp mill at Port Angeles, Wash. *TT 0.8: P 0.8.*—Summer 1930 Engr. on hydraulic and pollution survey in connection with lawsuit against Rainier Pulp & Paper Co., stream gauging, tide studies, water sampling, oyster culture, maps, etc., and Oct. 1930 to June 1931 (while student) on continuation of same work, dilution studies, hydrographs, etc. *TT 0.2: SP 0.2.—TT 5.7: SP 0.9: P 4.8.* Refers to C. W. Harris, C. C. More, R. G. Tyler.

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(12) **KIMBROUGH, CLYDE WILLIAM**, 9201 South Park Ave., Tacoma, Wash. (Age 27. Born Tacoma, Wash.) 1929 B. S. in Arch. Eng., Wash., State Coll. *TT 4: P 4.*—June to Dec. 1929 with Sutton, Whitney & Dugan and Silas E. Nelsen, Architects, Tacoma, Wash., on engineering design and drafting. *TT 0.5: P 0.5: RC 0.5: D 0.5.*—Dec. 1929 to March 1930 Field Draftsman, and March 1930 to date Asst. Engr., Dept. of Public Utilities, Tacoma, on Cushman Dam No. 2. *TT 1.5: SP 0.1: P 1.4: RC 1.4.—TT 6: SP 0.1: P 5.9: RC 1.9: D 0.5.* Refers to A. P. Dean, V. Gongwer, J. G. Heinz, M. K. Snyder, O. L. Waller, W. H. Wick.

698

(3) KINNEY, JOSEPH STERLING, 2213 Twelfth St., Troy, N. Y. (Age 22. Born Millport, N. Y.) 1931 C. E., Rens. Pol. Inst. TT 4: P 4. Refers to E. R. Cary, L. W. Clark, H. B. Compton, T. R. Lawson, W. W. Rousseau.

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(12) KINZEL, EDWARD, 964 East Thirteenth St., Spokane, Wash. (Age 29. Born Fresno, Cal.) 1931 B. S. in Civ. Eng., State Coll. of Wash. TT 4: P 4.—May to Dec. 1929 Rodman, California Highway Comm. TT 0.3: SP 0.3.—TT 4.3: SP 0.3: P 4. Refers to H. E. Phelps, M. K. Snyder.

700

(1) KISWALTER, GEORGE, Jr., 76 Seaman Ave., New York City. (Age 21. Born St. Petersburg, Russia.) 1930 A. B., Dartmouth Coll. 1931 C. E., Thayer School Civ. Eng. TT 4: P 4. Refers to R. Fletcher, A. W. French, O. E. Hovey, R. R. Marsden, A. P. Richmond, Jr.

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(7) KNIGHT, CHARLES EDWARD, 7385 Poe Ave., Detroit, Mich. (Age 46. Born Lees Park, Nebr.) 1912 B. S. in Civ. Eng., Wash. State Coll. TT 4: P 4.—April to July 1912 with Bixby & White, Los Angeles, Cal., on hydraulic computations. TT 0.1: SP 0.1.—Aug. 1912 to Sept. 1913 with U. S. Reclamation Service, Sunnyside Project, Washington, drafting and computations. TT 0.4: SP 0.4.—Sept. 1913 to Sept. 1918 and May to Aug. 1921 with George Jerome, Civ. Engr., Detroit, Mich., on computations, paving, water and sewer plans, supervised construction of large tunnel sewer; last 19 months had entire charge of office. TT 4.9: SP 0.4: P 4.5: RC 3.2: D 2.3.—Sept. 1918 to March 1919 Fitter with Detroit Shop-building Co., Wyandotte, Mich. TT 0.2: SP 0.2.—March to Aug. 1919 Costkeeper with R. D. Baker, Paving Contr., checking yardages on four paving jobs. TT 0.4: P 0.4: RC 0.4.—Aug. 1919 to Feb. 1920 Engr., George A. Tuller Co., Gen. Bldgs. & Contrs., on addition to Fisher Body Plant No. 10. TT 0.5: P 0.5: RC 0.5.—Feb. 1920 to Jan. 1921 Chf. Asst. with Warner & Warner, Civ. Engrs., Detroit, Mich., in charge of work. TT 0.9: P 0.9: RC 0.9.—Aug. 1921 to Dec. 1922 with Verner, Wilhelm & Molby, Archts. and Engrs., in charge of survey work. TT 1.4: P 1.4: RC 1.4.—Jan. 1923 to date in private practice in Detroit, until 1929 chiefly on sub-division; since 1929 has been Village Engr. of Garden City, Mich., designed water system (now in operation) to bring water from Detroit (3 miles); past year working with J. French Paddock on a large development in Virginia, entailing water system, storm and sanitary drainage. TT 8.5: P 8.5: RC 8.5: D 2.—TT 21.4: SP 1.2: P 20.2: RC 14.9: D 4.3. Refers to M. R. Fisher, C. W. Hubbell, L. G. Lenhardt, J. W. Reid, G. H. Ruhling, F. H. Stephenson, F. E. Weber.

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(1) KOEHLER, ALFRED FREDERICK, 2332 Walton Ave., New York City. (Age 22. Born New York City.) 1931 B. S. in C. E., N. Y. Univ. TT 4: P 4.—Summer 1929 with Douglas Knox, Inc., Civ. Engr. & Land Surveyor, New York City.—Summer 1930 Cableman on Hudson River Bridge at Ft. Lee, for J. A. Roebling Sons Co., Trénton, N. J.—TT 4: P 4. Refers to E. G. Hooper, C. T. Schwarze.

703

(13) KOTTA, RAY JOSEPH, 873 Broadway, San Francisco, Cal. (Age 26. Born San Francisco, Cal.) 1925 to 1926 student in Civ. Eng., St. Mary's Coll.; also studied Eng. at Univ. of California Extension, and Structural Eng. with Wilson Eng. School, Cambridge, Mass. Jan. to June 1924 and Aug. 1926 to July 1928 Draftsman, successively with Western Hardwood Mfg. Co., San Francisco, on layouts, plans and details for stores, remodelling, alterations, estimating and general office work (6 months), with Eng. Dept., Pacific Telegraph & Telephone Co., San Francisco, on map work for underground conduit, etc. (2 months), with Bldg. Dept., The Emporium (Dept. Store), San Francisco, on layouts, design plans and general construction details for rearranging store (10 months), with California Div. of Highways, Dist. II, Redding, Cal., checking and computing field notes, plotting cross sections, etc. (6 months), and with U. S. Constr. Quartermaster Office, Presidio, San Francisco, measuring and making plans and sectional details of permanent quarters (war-time construction). TT 2.1: SP 0.3: P 1.8: RC 0.5.—Aug. to Dec. 1928 Chairman for A. Werber, San Francisco, survey and subdivision. TT 0.2: P 0.2.—Dec. 1928 to March 1929 Draftsman, Western Union Plant Dept., San Francisco, revising, correcting and keeping up-to-date record tracings of wiring diagrams, equipment, layout, construction and maintenance of stations, etc. TT 0.3: P 0.3.—March to May 1929 Rodman and Chainman, with C. Williams, San Francisco, on topographical survey of Niles Canyon Reservoir Lakes for Alameda County Water System, etc. TT 0.1: SP 0.1.—May 1929–Nov. 1930 Draftsman, Constr. and Maintenance Dept., Shell Oil Co., San Francisco, on layout and design of service stations, depots, tanks, piping, retaining walls, etc.; later in Eng. Dept. on chemical and nitrate plant project. TT 1.5: P 1.5.—Dec. 1930 to April 1931 Draftsman with H. Schwerlin, Redwood

1928 to April 1931 Asst. Engr., and at present Asst. Materials Engr., Ohio Div. of Highways, on construction, designing concrete mixes, supervising field tests, reviewing materials used in Div. 5 (7 counties), etc. *TT 3.1: P 3.1: RC 3.1: TT 6.3: P 6.3: RC 4.3.* Refers to E. C. Blosser, J. H. Herron, W. L. Leach, R. R. Litehiser, C. H. Lovejoy.

692

(8) KESSLER, WARREN LEONARD, 314 St. Mary St., Pekin, Ill. (Age 25. Born Pekin, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.*—April to Sept. 1927 Chairman, Atchison, Topeka & Santa Fe R. R.—June 1929 to date (while student) Office Engr., The L. E. Myers Co., Chicago, Ill.—*TT 4: P 4.* Refers to J. J. Doland, W. C. Huntington, G. W. Pickels, T. C. Shedd, C. C. Wiley.

693

(8) KETCHUM, MILO SMITH, JR., 1114 West California Ave., Urbana, Ill. Graduating student awarded Central Illinois Section prize. (Age 21. Born Denver, Colo.) 1931 B. S. in C. E., Univ. of Ill. *TT 4: P 4.*—Summers 1929 and 1930 with U. S. Bureau of Public Roads successively as Rodman and Acting Transitman, road relocation, Shoshone National Forest, Wyo., and Student Engr., concrete research studies, Div. of Management, Sheboygan, Wis.—*TT 4: P 4.* Refers to J. J. Doland, W. C. Huntington.

694

(8) KETTENHOFEN, ARTHUR PETER, 427 Liberty St., Aurora, Ill. (Age 22. Born Aurora, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.* Refers to H. E. Babbitt, W. C. Huntington.

695

(15) KIDD, JEFFERSON ERNEST, 112 DeSota St., Alexandria, La. (Age 29. Born Ruston, La.) Registered C. E., State of Louisiana. 1924 B. S. in C. E., and 1929 C. E., Ga. School Tech. *TT 4: P 4.*—July 1924 to date with Louisiana Highway Comm., until Oct. 1925 as Asst. Maintenance Supt. on gravel, asphalt and concrete roads, bridge repairs, drainage problems, etc., Oct. 1925 to Oct. 1926 Dist. Maintenance Supt. in responsible charge of maintenance of 700 miles of similar roads, surfacing, culverts, bridges, and drainage canals, and since Oct. 1926 Res. Engr., Bridge Dept., in responsible charge of location and construction of concrete, steel and timber bridges. *TT 7: P 7: RC 5.5: TT 11: P 11: RC 5.5.* Refers to E. L. Erickson, N. E. Lant, W. H. Myhand, E. E. Shutts, J. R. Wendt, Sr.

696

(12) KIELY, JOHN ROCHE, 1104 North Steele St., Tacoma, Wash. (Age 24. Born Berkeley, Cal.) 1931 B. S. in C. E., Univ. of Wash. *TT 4: P 4.*—July to Nov. 1926 Rodman and Draftsman, assisted on estimates, inspection, etc., and Nov. 1926 to Oct. 1927 Instrumentman and Estimator on construction of pulp mill and Plant Engr. during operation under A. J. Bennett, Shelton, Wash. *TT 0.6: SP 0.6.*—Feb. to June 1928 (while student) Steel Detailer on reinforced concrete construction, apartment buildings, garages, etc., W. H. Witt & Co.—Summer 1928 Instrumentman on mapping, triangulation survey for tramway, extension of highway for park service, under R. Waterhouse, Longmire, Wash.—Jan. to June 1929 (while student) Draftsman, Shell Oil Co., on plant maps, checking deeds and reinforced concrete design, etc.—Summer 1929 Engr. on construction and design of addition (\$150 000) to Rainier Pulp & Paper Co., designed and supervised construction of reinforced concrete building and tanks (\$100 000), wood structures, foundations, etc. (\$50 000) (all under supervision of Chf. Engr.) *TT 0.1: SP 0.1.*—Oct. 1929 to July 1930 with Olympic Forest Products Co., until Feb. 1930 as Designer, designing and detailing warehouse (\$45 000), chip-storage building (\$70 000), miscellaneous timber, concrete and steel design, piping layouts, etc., and after Feb. 1930 Asst. Res. Engr. on construction of same work, also miscellaneous hydraulic design, 40-in. pump line and fittings, specifications for tower foundations and timber trusses for pulp mill at Port Angeles, Wash. *TT 0.8: P 0.8.*—Summer 1930 Engr. on hydraulic and pollution survey in connection with lawsuit against Rainier Pulp & Paper Co., stream gauging, tide studies, water sampling, oyster culture, maps, etc., and Oct. 1930 to June 1931 (while student) on continuation of same work, dilution studies, hydrographs, etc. *TT 0.2: SP 0.2: TT 5.7: SP 0.9: P 4.8.* Refers to C. W. Harris, C. C. More, R. G. Tyler.

697

(12) KIMBROUGH, CLYDE WILLIAM, 9201 South Park Ave., Tacoma, Wash. (Age 27. Born Tacoma, Wash.) 1929 B. S. in Arch. Eng., Wash., State Coll. *TT 4: P 4.*—June to Dec. 1929 with Sutton, Whitney & Dugan and Silas E. Nelsen, Archts., Tacoma, Wash., on engineering design and drafting. *TT 0.5: P 0.5: RC 0.5: D 0.5.*—Dec. 1929 to March 1930 Field Draftsman, and March 1930 to date Asst. Engr., Dept. of Public Utilities, Tacoma, on Cushman Dam No. 2. *TT 1.5: SP 0.1: P 1.4: RC 1.4: TT 6: SP 0.1: P 5.9: RC 1.9: D 0.5.* Refers to A. P. Dean, V. Gongwer, J. G. Heinz, M. K. Snyder, O. L. Waller, W. H. Wick.

698

(3) KINNEY, JOSEPH STERLING, 2213 Twelfth St., Troy, N. Y. (Age 22. Born Millport, N. Y.) 1931 C. E., Rens. Pol. Inst. TT 4: P 4. Refers to E. R. Cary, L. W. Clark, H. B. Compton, T. R. Lawson, W. W. Rousseau.

699

(12) KINZEL, EDWARD, 964 East Thirteenth St., Spokane, Wash. (Age 29. Born Fresno, Cal.) 1931 B. S. in Civ. Eng., State Coll. of Wash. TT 4: P 4.—May to Dec. 1929 Rodman, California Highway Comm. TT 0.3: SP 0.3.—TT 4.3: SP 0.3: P 4. Refers to H. E. Phelps, M. K. Snyder.

700

(1) KISWALTER, GEORGE, Jr., 76 Seaman Ave., New York City. (Age 21. Born St. Petersburg, Russia.) 1930 A. B., Dartmouth Coll. 1931 C. E., Thayer School Civ. Eng. TT 4: P 4. Refers to R. Fletcher, A. W. French, O. E. Hovey, R. R. Marsden, A. P. Richmond, Jr.

701

(7) KNIGHT, CHARLES EDWARD, 7385 Poe Ave., Detroit, Mich. (Age 46. Born Lees Park, Nebr.) 1912 B. S. in Civ. Eng., Wash. State Coll. TT 4: P 4.—April to July 1912 with Bixby & White, Los Angeles, Cal., on hydraulic computations. TT 0.1: SP 0.1.—Aug. 1912 to Sept. 1913 with U. S. Reclamation Service, Sunnyside Project, Washington, drafting and computations. TT 0.4: SP 0.4.—Sept. 1913 to Sept. 1918 and May to Aug. 1921 with George Jerome, Civ. Engr., Detroit, Mich., on computations, paving, water and sewer plans, supervised construction of large tunnel sewer; last 19 months had entire charge of office. TT 4.9: SP 0.4: P 4.5: RC 3.2: D 2.3.—Sept. 1918 to March 1919 Fitter with Detroit Shop-building Co., Wyandotte, Mich. TT 0.2: SP 0.2.—March to Aug. 1919 Costkeeper with R. D. Baker, Paving Contr., checking yardages on four paving jobs. TT 0.4: P 0.4: RC 0.4.—Aug. 1919 to Feb. 1920 Engr., George A. Tuller Co., Gen. Bldrs. & Contrs., on addition to Fisher Body Plant No. 10. TT 0.5: P 0.5: RC 0.5.—Feb. 1920 to Jan. 1921 Chf. Asst. with Warner & Warner, Civ. Engrs., Detroit, Mich., in charge of work. TT 0.9: P 0.9: RC 0.9.—Aug. 1921 to Dec. 1922 with Verner, Wilhelm & Molby, Archts. and Engrs., in charge of survey work. TT 1.4: P 1.4: RC 1.4.—Jan. 1923 to date in private practice in Detroit, until 1929 chiefly on sub-division; since 1929 has been Village Engr. of Garden City, Mich., designed water system (now in operation) to bring water from Detroit (3 miles); past year working with J. French Paddock on a large development in Virginia, entailing water system, storm and sanitary drainage. TT 8.5: P 8.5: RC 8.5: D 2.—TT 21.4: SP 1.2: P 20.2: RC 14.9: D 4.3. Refers to M. R. Fisher, C. W. Hubbell, L. G. Lenhardt, J. W. Reid, G. H. Ruhling, F. H. Stephenson, F. E. Weber.

702

(1) KOEHLER, ALFRED FREDERICK, 2332 Walton Ave., New York City. (Age 22. Born New York City.) 1931 B. S. in C. E., N. Y. Univ. TT 4: P 4.—Summer 1929 with Douglas Knox, Inc., Civ. Engr. & Land Surveyor, New York City.—Summer 1930 Cableman on Hudson River Bridge at Ft. Lee, for J. A. Roebling Sons Co., Trenton, N. J.—TT 4: P 4. Refers to E. G. Hooper, C. T. Schwarze.

703

(13) KOTTA, RAY JOSEPH, 873 Broadway, San Francisco, Cal. (Age 26. Born San Francisco, Cal.) 1925 to 1926 student in Civ. Eng., St. Mary's Coll.; also studied Eng. at Univ. of California Extension, and Structural Eng. with Wilson Eng. School, Cambridge, Mass. Jan. to June 1924 and Aug. 1926 to July 1928 Draftsman, successively with Western Hardwood Mfg. Co., San Francisco, on layouts, plans and details for stores, remodeling, alterations, estimating and general office work (6 months), with Eng. Dept., Pacific Telegraph & Telephone Co., San Francisco, on map work for underground conduit, etc. (2 months), with Bldg. Dept., The Emporium (Dept. Store), San Francisco, on layouts, design plans and general construction details for rearranging store (10 months), with California Div. of Highways, Dist. II, Redding, Cal., checking and computing field notes, plotting cross sections, etc. (6 months), and with U. S. Constr. Quartermaster Office, Presidio, San Francisco, measuring and making plans and sectional details of permanent quarters (war-time construction). TT 2.1: SP 0.3: P 1.8: RC 0.5.—Aug. to Dec. 1928 Chairman for A. Werber, San Francisco, survey and subdivision. TT 0.2: P 0.2.—Dec. 1928 to March 1929 Draftsman, Western Union Plant Dept., San Francisco, revising, correcting and keeping up-to-date record tracings of wiring diagrams, equipment, layout, construction and maintenance of stations, etc. TT 0.3: P 0.3.—March to May 1929 Rodman and Chairman, with C. Williams, San Francisco, on topographical survey of Niles Canyon Reservoir Lakes for Alameda County Water System, etc. TT 0.1: SP 0.1.—May 1929—Nov. 1930 Draftsman, Constr. and Maintenance Dept., Shell Oil Co., San Francisco, on layout and design of service stations, depots, tanks, piping, retaining walls, etc.; later in Eng. Dept. on chemical and nitrate plant project. TT 1.5: P 1.5.—Dec. 1930 to April 1931 Draftsman with H. Schwerin, Redwood

City, completing two sheets, 50-ft. scale maps of San Francisco business retail district, showing lots, owners, first floor tenants, valuations, improvements and tax rates. *TT 0.4: P 0.4: RC 0.4.—TT 4.6: SP 0.6: P 4: RC 0.9.* Refers to H. S. Comly, H. H. Ferrebee, W. S. Hassenmiller, R. W. Henry, H. A. Jacobson.

704

(1) **KRAUS, JOHN HENRY**, 84-52 Grand Ave., Elmhurst, N. Y. (Age 20. Born New York City.) 1931 B. S. in C. E., New York Univ. *TT 4: P 4.* Refers to E. G. Hooper, C. T. Schwarze.

705

(4) **KROTT, CARL HARRY HERBERT**, 326 South Tenth St., Reading, Pa. Graduating student awarded Lehigh Valley Section prize. (Age 22. Born Reading, Pa.) 1931 B. S. in C. E., Lehigh Univ. *TT 4: P 4.—Feb. 1926 to Sept. 1927 Rodman and Transitman with Neubling & Mast, Reading, Pa. TT 0.7: SP 0.7.—TT 4.7: SP 0.7: P 4.* Refers to S. A. Becker, M. O. Fuller, C. H. Sutherland, E. H. Uhler, W. L. Wilson.

706

(13) **LaGRONE, HENRY FRANK**, 1703 Bancroft Way, Berkeley, Cal. (Age 27. Born Arlington, Tenn.) 1929 B. S., Coll. of Civ. Eng., Univ. of Cal. *TT 4: P 4.—Feb. to Aug. 1923 and Jan. 1924 to April 1931 (part of time from Aug. 1924 to May 1927 and Jan. 1928 to May 1929) Mech. Draftsman, Oliver United Filters, Inc., Oakland, Cal., drafting, also (after June 1929) designing, writing specifications, cost estimating, etc. TT 2.6: SP 0.8: P 1.8: D 1.8.—April 1931 to date Jun. Highway Engr., U. S. Bureau of Public Roads.—TT 6.6: SP 0.8: P 5.8: D 1.8.* Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry.

707

(11) **LAINE, LEO LAURI**, 20 Cowan Ridge, Lowell, Ariz. (Age 20. Born Aberdeen, Wash.) 1931 B. S. in C. E., Univ. of Ariz. *TT 4: P 4.* Refers to E. S. Borgquist, F. C. Kelton, J. C. Park.

708

(11) **LANGSNER, GEORGE**, 361 South Catalina Ave., Pasadena, Cal. (Age 23. Born Brooklyn, N. Y.) 1931 B. S., Cal. Inst. Tech. *TT 4: P 4.—June 1931 to date Chairman, California Div. of Highways, Descanso, Cal. TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4.* Refers to R. R. Martel, W. W. Michael, A. L. Sonderegger, F. Thomas.

709

(1) **LANNING, FULTON**, 112 West Seventh Ave., Roselle, N. J. (Age 29. Born Perth Amboy, N. J.) 1925 M. E., Stevens Inst. Tech. *TT 4: P 4.—July to Aug. 1924 Rodman, Nevada Consolidated Copper Co.—June 1925 to March 1927 Timekeeper and Job Accountant, and on lines and levels, Turner Constr. Co., New York City, cost end of construction and layout of reinforced concrete construction. TT 1.8: P 1.8.—March 1927 to Dec. 1929 with James Stewart & Co., New York City, as Asst. Supt. and Engr., on skyscrapers, roads, apartments, hospitals, etc., in charge of layout and of Sub-Contractor. TT 2.7: P 2.7: RC 0.8.—Jan. 1930 to date Engr., National Lumber Mfrs.' Association, New York City, on sales promotion, dealing with architects, engineers, builders and designers on concrete construction and use of lumber, mapping and developing his own work. TT 1.5: P 1.5: RC 0.6.—TT 10: P 10: RC 1.4.* Refers to F. H. Alcott, F. P. Cartwright, C. O. Gunther, R. H. Mann, C. J. Suhr.

710

(9) **LAPPA, GEORGE PAUL**, 515 Mellish Ave., Cincinnati, Ohio. (Age 29. Born Petrograd, Russia.) 1928 C. E., Univ. of Cin. *TT 4: P 4.—Oct. 1925 to Dec. 1928 (until June 1928 while student) Jun. Civ. Engr., Board of Rapid Transit Comm. of Cincinnati, Ohio. TT 0.4: SP 0.2: P 0.2.—May 1929 to date Draftsman, until June 1931 for Columbia Eng. & Management Corporation, and at present for Auditor's Office, Hamilton County Court House, Cincinnati. TT 1.5: SP 0.7: P 0.8.—TT 5.9: SP 0.9: P 5.* Refers to H. B. Luther, F. L. Raschig.

711

(10) **LAPSLEY, JOHN WOODS**, 1904 Quintard Ave., Anniston, Ala. (Age 23. Born Anniston, Ala.) 1931 B. S. in C. E., Univ. of Ala. *TT 4: P 4.* Refers to G. J. Davis, Jr., D. C. A. du Plantier.

712

(7) **LARSON, CLARENCE EDWARD**, 12655 Sussex St., Detroit, Mich. (Age 21. Born Superior, Wis.) 1931 B. S. E. (C. E.), Univ. of Mich. *TT 4: P 4.* Refers to A. J. Decker, R. L. Morrison, C. O. Wisler.

713

(9) **LAUTERBACH, RITTNER ANDREW**, 3115 Wayne Ave., Dayton, Ohio. (Age 23. Born Dayton, Ohio.) 1931 B. S. in C. E., Univ. of Dayton. *TT 4: P 4.—June 1927 to Feb. 1928*

Office Clerk with Ross W. Harris, Cons. Engr., Madison, Wis., on traffic survey of Dayton, checked and compiled data. *TT 0.3: SP 0.3.*—Summer 1930 with Eng. Dept., Dayton, as Rodman and Signalman on triangulation party.—June 1931 to date Laboratory Asst. Physical Testing Engr., Bowser-Morner Testing Laboratory, Dayton. *TT 4.9: SP 0.3: P 4.* Refers to E. O. Brown, J. J. Chamberlain, Jr., J. F. Hale.

714

(10) **LEE, FRANK WARNER, Jr.**, 1321 Pendleton St., Columbia, S. C. (Age 22. Born Lynchburg, Va.) 1931 B. S., Clemson A. & M. Coll. of S. C. *TT 4: P 4.* Refers to E. L. Clarke, H. E. Glenn.

715

(1) **LEHLBACH, ARNOLD MILTON**, 115 Florence Ave., Irvington, N. J. (Age 21. Born Irvington, N. J.) 1931 B. S., Rutgers Univ. *TT 4: P 4.*—Summers 1928-1930 Rodman, City of Newark, N. J., on surveys.—*TT 4: P 4.* Refers to H. N. Lendall, W. Rudolfs.

716

(5) **LEVY, MORTON PAUL**, 45 Court St., Portsmouth, Va. (Age 22. Born Portsmouth, Va.) 1931 B. S. in C. E., Washington and Lee Univ. *TT 4: P 4.* Refers to J. A. Anderson, W. T. Lyle.

717

(15) **LEWIS, SIDNEY FRANCIS, III**, 1229 North Rampart St., New Orleans, La. (Age 23. Born New Orleans, La.) 1931 B. E. in Civ. Eng., Tulane Univ. *TT 4: P 4.* Refers to D. Derickson, W. B. Gregory, S. F. Lewis.

718

(1) **LINK, ROBERT EMMETT**, 1040 Anderson Ave., New York City. (Age 39. Born New York City.) 1916 B. S. in C. E., Cooper Union.—Oct. 1913-Sept. 1916 Asst. Engr., Empire City Subway Co., New York City, on construction of duct lines and subsurface structures. *TT 3: P 3: RC 3: D 3.*—Oct.-Dec. 1916 Chf. of Party and Asst. to Gen. Supt., Foundation Co., Ltd., Canada, on nickel-plant construction. *TT 0.2: P 0.2: RC 0.2: D 0.2.*—March to Oct. 1918 Supt. with Smith, Hauser & McIsaac, Baltimore, Md., on construction. *TT 0.6: P 0.6: RC 0.6: D 0.6.*—1918 to 1919 with U. S. Army and on various job estimating, Northwestern Constr. Co., Asst. Statistician, New York Edison Co., Stock Exchange Book-keeper, personnel appraisal work, with Bartlett-Heywood.—Jan. 1917-Feb. 1918 and Dec. 1919 to date with New York Steam Corporation, New York City, as Constr. Engr. in charge of design and installation of high-pressure steam mains and equipment and (since Dec. 1919) Supt. of Distribution and Supt. supervising and responsible for design and maintenance of equipment in street and inside of buildings and (past eight years) Gen. Supt. of Constr., in complete charge of organization and responsible for design, bridging and tunneling supports, anchoring and for guaranteeing main for one year (main extensions \$3 500 000 annually). *TT 12.7: P 12.7: RC 12.7: D 12.7.*—*TT 16.5: P 16.5: RC 16.5: D 16.5.* Refers to W. J. Baldwin, Jr., J. J. Durfee, D. C. Johnson, J. L. Lamb, C. A. Latimer, R. A. MacGregor, F. B. Nelson.

719

(2) **LOGAN, ARTHUR LAWRENCE**, 158 Pierce St., Middleboro, Mass. (Age 25. Born Middleboro, Mass.) 1931 B. S., Univ. of Ill. *TT 4: P 4.*—Aug. to Dec. 1924 and May to Sept. 1925 Rodman, Div. of Highways, Massachusetts Dept. of Public Works, acting as Inspector and Instrumentman on road construction, Springfield, Mass. *TT 0.3: SP 0.3.*—Oct. 1925 to Aug. 1927 with Levering & Garrigues Co., three months as Timekeeper, then Asst. to New England Mgr. at Hartford Office. *TT 1: SP 1.*—*TT 5.3: SP 1.3: P 4.* Refers to J. J. Doland, J. Vawter.

720

(13) **LOGAN, GLEN EARNEST**, Box 1304, Stanford University, Cal. (Age 23. Born Cherryvale, Kans.) 1931 A. B. in Eng., Stanford Univ. *TT 4: P 4.*—Summers 1927-1930 Forestry Dept., Los Angeles County, Cal., on construction and building, telephone construction, mapping, drafting, surveying, etc.—*TT 4: P 4.* Refers to L. B. Reynolds, E. C. Thomas.

721

(16) **LOSEE, MILTON GILBERT**, 533 Gladstone Blvd., Kansas City, Mo. (Age 32. Born Kansas City, Mo.) Aug. to Oct. 1917 Material Clerk, George A. Fuller Constr. Co., Kansas City, Mo. *TT 0.1: SP 0.1.*—Nov. 1917 to Jan. 1923 (at intervals) Draftsman, Standard Oil Co. of Indiana, Sugar Creek, Mo. (1 year), C. & C. Development Co. (3 months), Ohleson Constr. Co. (7 months), for F. E. McIlvain, Archt. (3 months), Kansas City Power & Light Co. (2 months), all of Kansas City, Mo., and Kansas City Testing Laboratories (over 7 months), also Constr. Inspector for the Laboratories. *TT 1.8: SP 1.4: P 0.4.*—Nov. 1921 to June 1922 and Jan. to March 1923 with Great Western Portland Cement Co., Mildred, Kans., as Draftsman and Engr. in charge of construction work. *TT 0.8: P 0.8: RC 0.5: D 0.3.*—April to May 1923 Topographical Draftsman, U. S. Forest Service, Albuquerque,

N. Mex. *TT 0.1: SP 0.1.*—May 1923 to Jan. 1924 Estimator and Engr. for Robert E. McKee, Contr., El Paso, Tex., in charge of various parts of construction. *TT 0.7: P 0.7: RC 0.7.*—Feb. 1924 to date Estimator, successively with John Gosling, Contr., George Fuller Green Constr. Co., Long Constr. Co. and since March 1929 with George P. Reintjes Co., all of Kansas City, Mo., estimating cost of construction work, bidding, closing contracts, purchasing, etc. *TT 7.4: P 7.4: RC 7.4: D 0.2.*—*TT 10.8: SP 1.5: P 9.3: RC 8.8: D 0.5.* Refers to C. E. Brown, A. C. Everham, J. C. Long, F. M. Veatch, C. C. Whittelsey.

722

(16) **LOUTZENHEISER, DONALD WILSON**, 1118 Ave. F, Gothenburg, Nebr. (Age 21. Born Gothenburg, Nebr.) 1931 B. S. in C. E., Univ. of Nebr. *TT 4: P 4.*—Summers 1927 and 1928 Chainman, Nebraska Dept. of Public Works.—Summer 1930 Student Engr., Div. of Management, Bureau of Public Roads.—*TT 4: P 4.* Refers to C. M. Duff, M. I. Evinger, H. J. Kesner, J. G. Mason, C. E. Mickey, D. D. Price.

723

(15) **LOWE, CLAYTON REEVES**, 535 St. Hypolite St., Baton Rouge, La. Graduating student awarded Louisiana Section prize. (Age 22. Born Shreveport, La.) 1931 B. S. in C. E., La. State Univ. *TT 4: P 4.*—Summer 1929 Rodman, Caddo Parish Highway Dept., Shreveport, La., on surveys.—*TT 4: P 4.* Refers to E. S. Bres, J. T. Bullen, W. T. Lyle, B. W. Pegues.

724

(2) **MacFARLAND, LESTER BURTON**, 226 Arlington St., Wollaston, Mass. (Age 23. Born Wollaston, Mass.) 1931 B. S., Mass. Inst. Tech. *TT 4: P 4.*—Summer 1930 Transitman and Rodman, State of New Hampshire, on surveys.—*TT 4: P 4.* Refers to J. B. Babcock, 3d, H. K. Barrows, C. M. Spofford.

725

(4) **MAC MURRAY, PAUL**, 4437 Chestnut St., Philadelphia, Pa. Graduating student awarded Lehigh Valley Section prize. (Age 22. Born Evansville, Ind.) 1931 B. S. in C. E., Lafayette Coll. *TT 4: P 4.* Refers to W. S. Lohr, L. Perry, E. H. Rockwell.

726

(13) **McATEE, FRAYNE LEIGH**, 2225 East Second St., Long Beach, Cal. (Age 29. Born Blackfoot, Idaho.) 1931 B. S. in C. E., Univ. of Utah. *TT 4: P 4.*—Aug. 1922 to March 1923 Rodman and Transitman, Milner Low Lift Canal Co., on location and construction of canals and pumping station. *TT 0.3: SP 0.3.*—March to Aug. 1923 and Jan. 1924 to Feb. 1925 student, successively at Univ. of Washington and Univ. of Idaho.—Aug. to Nov. 1923 Field Draftsman, Idaho Power Co., on location of power line from American Falls to Shoshone Falls, Idaho. *TT 0.1: SP 0.1.*—March to July 1925 Rodman and Chainman, Oregon Short Line R. R. *TT 0.2: SP 0.2.*—July to Aug. 1925 and June to Aug. 1927 Instrumentman with D. L. Alexander, Twin Falls, Idaho, on mining assessment and improvement work. *TT 0.1: P 0.1.*—Aug. 1925 to Jan. 1926 Asst. Highway Engr., Raft River Highway Dist., on highway location and construction. *TT 0.2: SP 0.2.*—Jan. 1926 to June 1927 Chf. party, Union Bridge Co., on location and construction of bridge across Snake River Canyon, Twin Falls. *TT 1.4: P 1.4.*—Aug. 1927 to Sept. 1928 Instrumentman, Dept. of Highways, Dept. of Public Works, Idaho, on location and construction. *TT 1.1: P 1.1.*—Sept. 1928 to March 1931 Student Instructor of surveying and material testing, Univ. of Utah.—*TT 7.4: SP 0.9: P 6.6.* Refers to J. E. Hayes, R. B. Ketchum, R. M. Murray, C. E. Painter, R. H. Wilson.

727

(16) **McINTYRE, JOHN CHANDLER**, 1643 Ellis Boulevard, Cedar Rapids, Iowa. (Age 23. Born Seaton, Ill.) 1931 B. S. in C. E., Univ. of Iowa. *TT 4: P 4.* Refers to B. J. Lambert, E. L. Waterman.

728

(12) **McKINSTRY, EDWARD NEWELL**, 724 D St., Grants Pass, Ore. (Age 27. Born Portland, Ore.) 1931 B. S. in Civ. Eng., Ore. State Coll. *TT 4: P 4.*—March 1924 to Sept. 1927 with Southern Pacific Co., until Nov. 1926 as Rodman, then Force Account Timekeeper. *TT 1.7: SP 1.7.*—*TT 5.7: SP 1.7: P 4.* Refers to J. R. Griffith, H. S. Rogers.

729

(15) **McNATT, EDMUND ALSTON**, Box 43, Buffalo, Tex. (Age 22. Born Bowie, Tex.) 1931 B. S. in C. E., Univ. of Tex. *TT 4: P 4.* Refers to E. C. H. Bantel, J. A. Focht, E. N. Gustafson, T. U. Taylor, B. F. Williams.

730

(7) **MADISON, KNOWLES KNOWLTON**, 750 Whitmore Rd., Detroit, Mich. (Age 28. Born St. Joseph, Mich.) 1925 B. S. M. E., Univ. of Mich. *TT 4: P 4.*—June 1925 to date Asst. Engr., Washtenaw County Road Comm., Ann Arbor, Mich. (June 1925 to March 1927) and

Wayne County Road Comm., Detroit (March 1927 to date), on surveys, construction, planning, estimating, etc. *TT 6: P 6: RC 3.7: D 2.3.—TT 10: P 10: RC 3.7: D 2.3.* Refers to A. R. Bailey, R. A. Dodge, L. M. Gram, H. A. Shuptrine, L. C. Smith, E. G. Willemin.

731

(1) **MAGUIRE, MICHAEL**, 72-16 Hayes Ave., Jackson Heights, N. Y. (Age 31. Born Cavan, Ireland.) 1920 B. E. and B. Sc., National Univ. of Ireland, Univ. Coll., Dublin. *TT 4: P 4.—*Oct. 1921 to June 1925 with Office of Public Works, Dublin, until June 1923 as Draftsman, plotting field notes and surveys, then Asst. Engr. on arterial drainage, in field on river and lake soundings, plotted surveys, took off quantities and estimated for two extensive drainage schemes (one completed) and after June 1924 Land Improvements Inspector, submitting plans and estimates for farm buildings to improve holdings in congested areas. *TT 2.8: SP 0.8: P 2: RC 1.—*Sept. 1925 to date Asst. Engr., Patrick McGovern, Inc., until May 1927 on construction of open-cut subway on Broad St., Philadelphia, then on 53d St. tunnels, compressed air, open-cut and hard rock tunnelling and after June 1929 on City Tunnel No. 2 for Board of Water Supply, caissons, shafts, rock tunneling, timbering. *TT 5.4: P 5.4: RC 5.1.—TT 12.2: SP 0.8: P 11.4: RC 6.1.* Refers to H. O. Boyer, L. Costello, W. D. Kramer, J. S. Macdonald, B. Marcus.

732

(1) **MANASSEH, NICOLAS ELIA**, Acre, Palestine. (Age 25. Born Acre, Palestine.) 1927 A. B., Am. Univ. of Beirut, Syria. 1931 B. S. E. (C. E.), Univ. of Mich. *TT 4: P 4.—*Jan. 1928 to date Surveyor in charge of architectural work of Univ. of Michigan Archaeological Expedition in Mesopotamia and Palestine.—*TT 4: P 4.* Refers to J. H. Cissel, L. M. Gram, R. H. Sherlock, R. S. Swinton, C. O. Wisler, J. S. Worley.

733

(14) **MARTIN, WILLIAM NOBLE**, 335 East Okmulgee, Muskogee, Okla. Graduating student awarded Oklahoma Section prize. (Age 22. Born Muskogee, Okla.) 1931 B. S. in C. E., Okla. Agri. & Mech. Coll. *TT 4: P 4.—*Feb. 1926 to Aug. 1927 Rodman, Draftsman and Inspector for City of Muskogee, Okla. *TT 0.8: SP 0.8.—TT 4.8: SP 0.8: P 4.* Refers to L. M. Bush, T. P. Clonts, V. H. Cochran, J. E. Kirkham, E. R. Stapley.

734

(15) **MATHEWS, JOHN WALLACE**, 3924 Jefferson Ave., El Paso, Tex. (Age 34. Born San Bernardino, Cal.) Sept. 1915 to Nov. 1917 student, Univ. of Ariz. *TT 1: P 1.—*Nov. 1917 to Jan. 1918 Rodman, Southern Pacific Co. *TT 0.1: SP 0.1.—*Jan. to March 1918 Instrumentman, El Paso & Southwestern R. R. *TT 0.1: SP 0.1.—*March 1918 to June 1919 with U. S. Army, 32d Engrs., Ry., as Corporal, designing railway terminal, Talmont, France. *TT 1.3: P 1.3: D 1.3.—*Sept. 1919 to June 1920 Draftsman, Pima County, Tucson, Ariz., highway and record drafting. *TT 0.4: SP 0.4.—*June 1920 to Oct. 1922 Instrumentman, Maintenance-of-Way Clerk, Arizona Eastern R. R. Co., Globe, Ariz., instrument work, valuation reports, estimating, drafting, supervising compilation of reports of M. of W. Dept. *TT 2.3: P 2.3: RC 2.3.—*Oct. 1922 to March 1926 with Southern Pacific Co., until Oct. 1925 as Senior Draftsman in Bakersfield, Cal., on office drafting and engineering statistical work, then Asst. Engr. in Tucson, laying out and supervising railway maintenance work and compiling reports. *TT 3.4: P 3.4: RC 0.4: D 3.—*March 1926 to Aug. 1927 Asst. Engr., F. C. S. P. de M., Mazatlan, Sinaloa, Mex., laying out work, designing and estimating costs and field supervision. *TT 1.4: P 1.4: RC 1.4: D 1.4.—*Sept. to Nov. 1927 Inspector, U. S. Bureau of Public Roads, Grand Canyon, Ariz., on road construction. *TT 0.1: SP 0.1.—*Dec. 1927 to date with Southern Pacific Co., until March 1930 as Draftsman in San Francisco and Bakersfield, Cal., on drafting and engineering statistical work and since April 1930 Instrumentman in El Paso, Tex., on alignment and elevation resurveys, line changes, drainage surveys, lease investigations, bridge locations, drafting, etc., in direct charge of work or with Asst. Engr. *TT 3.5: SP 0.1: P 3.4: D 2.1.—TT 13.7: SP 0.9: P 12.8: RC 4.1: D 7.8.* Refers to C. M. Colvin, F. C. Kelton, H. M. Mitchell, H. C. Schwalen, V. J. Von Schoeler, W. F. Way.

735

(7) **MATHEWSON, JOHN HARDIE**, 816 McKinley Ave., Ann Arbor, Mich. (Age 32. Born Perth, Scotland.) 1931 B. S. in C. E., Univ. of Mich. *TT 4: P 4.—*1915 to Aug. 1919 with Canadian and British Armies, trained as Gunner and Signaller in Royal Artillery School, Woolwich, England; and non-commissioned officer in Signal Service.—Aug. 1919 to June 1921 with a construction company, and June 1921 to June 1922 with Northern Elec. Co., Montreal, Canada.—June 1922 to Aug. 1927 with Bell Telephone Co. of Canada, until March 1925 as Fieldman and Field Engr. on surveys, layout and design of telephone distribution systems for towns and cities, April 1925 to Feb. 1926 Engr., scheduling outside plant equipment in conjunction with manufacturer, and after March 1926 Supervisor of Methods and Results, handling equipment estimates and schedules, writing specifications and contracts

control of investment in plant supplies. *TT 4.4: SP 0.7: P 3.7: RC 1.5: D 0.8.—TT 8.4: SP 0.7: P 7.7: RC 1.5: D 0.8.* Refers to L. M. Gram, W. C. Hoad, R. K. Holland, F. N. Menefee, M. J. Orbeck, C. O. Wisler, J. S. Worley.

736

(5) MAULSBY, DAVID LEE, 1624 Eutaw Pl., Baltimore, Md. Graduating student awarded Virginia Section prize (1930). (Age 26. Born Charlottesville, Va.) 1930 B. S. in Civ. Eng., Univ. of Va. *TT 4: P 4.*—July 1930 to date with Bartlett-Hayward Co., Baltimore, Md., as Asst. Supt. of coupling shop. *TT 1: P 1.—TT 5: P 5.* Refers to J. L. Newcomb, L. H. Williamson.

737

(5) MENCKEN, AUGUST, 1524 Hollins St., Baltimore, Md. (Age 42. Born Baltimore, Md.) 1909 to 1913 successively Rodman and Chainman for Wm. Whitney (4 months), Inspector, Maryland State Roads Comm. (8 months), Engr., Stewart, Jones Co., Gastonia, N. C., on railroad construction (5 months), Draftsman, Southern R. R. (7 months) and Asst. to Engr., Sweatman Co., building sewers, Baltimore, Md. (7 months). *TT 1.3: SP 1.3.*—1919 to 1920 Contr. at Cambridge, Mass.; designed part of and built plant for Liberty Yeast Co. *TT 0.6: P 0.6: RC 0.6: D 0.4.*—1913 to date (except 1919 to 1920, 7 months) with Claiborne Johnston Co., Inc., Gen. Contrs., Baltimore, Md., until 1919 as Constr. Engr. on Lake Montebello filtration plant; designed and built plants for Monumental Yeast Co. and Gathman Eng. Co.; had charge of work on plant for Poole Eng. Co. and of building operations at Camp Meade; designed laundry and dairy buildings and designed and built plant for Liberty Yeast Co., Baltimore; 1920 (6 months) Engr. at Havana, Cuba, on surveys and designing and building small addition to hotel; 1920 to 1923 Engr. at Baltimore; designed part of and built plants for Federal Yeast Co. and Republic Radiator & Boiler Co.; since 1923 Vice-Pres.; designed plant for American Cider & Vinegar Co., Baltimore, and built various bridges and roads for Maryland State Roads Comm. *TT 17.3: P 17.3: RC 17.3: D 5.2.—TT 19.2: SP 1.3: P 17.9: RC 17.9: D 5.6.* Refers to J. W. Armstrong, J. A. Higgs, Jr., J. C. Little, S. Purcell, V. B. Siems, F. L. Simon, E. B. Whitman.

738

(4) MERZ, ROBERT HERMAN, 2932 Hale St., Frankford, Philadelphia, Pa. (Age 21. Born Woodside, N. Y.) 1931 B. S. in C. E., N. Y. Univ. *TT 4: P 4.* Refers to H. E. Breed, E. G. Hooper, C. T. Schwarze, L. C. L. Smith.

739

(16) METCALFE, HENRY MOORE, 308 South Iowa Ave., Washington, Iowa. Graduating student awarded Iowa Section prize. (Age 26. Born Grimsby, Ont., Canada.) 1931 B. S. in C. E., Iowa State Coll. *TT 4: P 4.*—March 1931 to date Bridge Inspector, Iowa Highway Comm. *TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4.* Refers to W. L. Foster, A. H. Fuller, A. Marston.

740

(15) METZGER, JOHN JOSEPH, Jr., 3126 Dauphine St., New Orleans, La. (Age 20. Born New Orleans, La.) 1931 B. E., Tulane Univ. *TT 4: P 4.* Refers to D. Derickson, A. T. Dusenbury, W. B. Gregory.

741

(14) MEYER, OTTO HERMAN, 3542 Flora Court, St. Louis, Mo. (Age 22. Born Columbia, Mo.) 1929 B. A., and 1931 B. S. in Eng. and C. E., Univ. of Mo. *TT 4: P 4.*—April 1931 to date with U. S. Engr. Dept., until June as Sub-Inspector and at present Inspector. *TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4.* Refers to A. L. Hyde, E. J. McCaustland, H. K. Rubey.

742

(4) MICK, FREDERICK EMIL, 3732 North Fifteenth St., Philadelphia, Pa. (Age 35. Born Philadelphia, Pa.) 1912 to date (except 1917 to 1918 with U. S. Army) with Link-Belt Co., Philadelphia, Pa., until 1913 on steel shop assembly work; 1914 to 1916 Draftsman, and 1919 to 1924, Draftsman and Checker on elevating and conveying machinery; 1925 to 1927 Asst. Engr. and Squad Boss in charge of estimating, detailing and designing sewage-plant equipment, and since 1928 Engr. in charge of sewage- and water-plant equipment, also in charge of design, estimating, writing specification, contract work, field inspections, etc. *TT 13: SP 4.5: P 8.5: RC 2.5: D 3.* Refers to H. M. Beaumont, C. A. Emerson, Jr., S. G. Hess, C. E. Keefer, L. G. Rice, M. B. Tark.

743

(5) MILLER, FRANK WAYLAND, 1736 G St. N. W., Washington, D. C. (Age 25. Born Whitesville, N. Y.) 1928 B. S. C. E., Univ. of Mich. *TT 4: P 4.*—Aug. 1928 to Nov. 1930 Structural Draftsman, Detroit (Mich.) Edison Co., detailing and designing structural steel for power houses, substations and general warehouses. *TT 2.2: P 2.2.*—Nov. 1930 to date

Structural Engr. (Asst. Grade), Office of Superv. Archt., Washington, D. C., designing structural steel and reinforced concrete for post-offices, etc. *TT 0.5: P 0.5.—TT 6.7: P 6.7.* Refers to J. H. Cissel, L. M. Gram, W. S. Housel, H. R. Kingsley, R. H. Sherlock.

744

(16) MILLER, HAROLD EUGENE, Box 216, Wathena, Kans. (Age 26. Born Lincoln, Kans.) 1931 B. S. in C. E., Univ. of Kans. *TT 4: P 4.*—June to Nov. 1925 with U. S. Coast and Geodetic Survey, on primary triangulation work, etc. *TT 0.2: SP 0.2.*—March 1927 to Sept. 1928 Instrumentman, Constr. Dept., Empire Cos., on surveys and drafting. *TT 0.7: SP 0.7.*—March 1929 to Feb. 1930 and summer 1930 Surveyman, and June 1931 to date Inspector on dike construction, Corps of Engrs., U. S. Army, on Missouri River Improvement. *TT 1.1: P 1.1.—TT 6: SP 0.9: P 5.1.* Refers to W. C. McNown, H. A. Rice, F. A. Russell.

745

(16) MILLIKAN, OLIVER HARVEY, 1627 Fifth St., Boulder, Colo. (Age 22. Born Arnett, S. Dak.) 1931 B. S. in C. E., Univ. of Colo. *TT 4: P 4.* Refers to F. R. Dungan, C. L. Eckel.

746

(6) MILLS, DONALD, 623 Cochran St., Sewickley, Pa. (Age 27. Born Bristol, England.) 1923 B. S. in C. E., Univ. of Bristol, England. *TT 4: P 4.*—Aug. 1923-Feb. 1926 Draftsman and Asst. Engr., Washington Suburban San. Dist., mapping, drafting and designing sewer and water systems, street layouts. *TT 1.7: SP 0.7: P 1.*—March 1926-Jan. 1927 Detailer, American Bridge Co., Ambridge, Pa., on bridges and mill buildings. *TT 0.5: SP 0.5.*—Feb. 1927 to date Draftsman and Senior Draftsman, Pennsylvania R. R. Co., designing railroad and highway bridges. *TT 4.5: P 4.5: RC 3: D 4.5.—TT 10.7: SP 1.2: P 9.5: RC 3: D 4.5.* Refers to C. A. Chaney, F. J. Evans, H. R. Hall, J. F. Leonard, R. G. Manning, R. B. Morse, J. P. Walton.

747

(3) MOFFETT, WILLIAM WEBB, 67 First Street, Troy, N. Y. (Age 22. Born New York City.) 1930 C. E. Rens. Pol. Inst. *TT 4: P 4.*—June to Sept. 1930 Office Engr., Montauk Beach Development Co., being Asst. to Chf. Engr., Chf. of Party on field work (surveying) and Computer on office work. *TT 0.3: P 0.3: RC 0.3.*—Sept. 1930 to date Instructor in mathematics and drawing, Rensselaer Polytechnic Inst. *TT 0.8: P 0.8.—TT 5.1: P 5.1: RC 0.3.* Refers to E. R. Cary, L. W. Clark, T. E. Ringwood.

748

(9) MOINICHEN, JOHAN LUDVIG, 1020 Temple Bar Bldg., Cincinnati, Ohio. (Age 29. Born Sogn, Norway.) 1925 Diplom Engr., Royal Tech. Univ., Norway. *TT 4: P 4.*—July to Oct. 1925 Chf. of Party, Coast & Geodetic Survey of Norway, on triangulation survey. *TT 0.3: P 0.3: RC 0.3.*—Nov. 1925 to Jan. 1926 Draftsman with Alexander Geist, New York City, on structural detailing. *TT 0.1: SP 0.1.*—Feb. 1926 to Dec. 1927 Eng. Draftsman, New York Central R. R. Co., general drafting and plans for Park Ave. Improvement in New York City. *TT 1.9: P 1.9: D 0.9.*—Jan. 1928 to date Draftsman, Cincinnati Union Terminal Co., coordinating and adjusting base-line system, general design and plans for construction of New Union Terminal. *TT 3.6: P 3.6: RC 1.—TT 9.9: SP 0.1: P 9.8: RC 1.3: D 0.9.* Refers to R. J. Bear, J. M. Belknap, A. M. Bouillon, P. Moller, G. A. Pierce, G. P. Stowitts, O. Wells.

749

(1) MONTANARI, IVO LOUIS, R. D. 1, Box 162, Ridgefield, Conn. (Age 22. Born Ancona, Italy.) 1931 C. E., Rens. Pol. Inst. *TT 4: P 4.* Refers to L. W. Clark, H. O. Sharp.

750

(9) MORRIS, JOHN RYAN, 412½ Front St., Marietta, Ohio. (Age 22. Born Highland, Ohio.) 1931 B. C. E., Ohio State Univ. *TT 4: P 4.* Refers to E. F. Coddington, L. Lee, C. T. Morris.

751

(15) MULLIN, HOWARD LEON, Box 26, Lake Providence, La. (Age 25. Born St. Marys, Ga.) 1929 B. S. in Civ. Eng., Ala. Pol. Inst. *TT 4: P 4.*—Summer 1927 Chairman, Alabama State Highway Comm.—Summer 1928 Draftsman with Warren E. Darrow, Cons. Engr., Columbus, Ga., being Design Apprentice.—June 1929 to Nov. 1930 Inspector, and Nov. 1930 to date Jun. Engr., Civil Service Comm., Mississippi River Flood Control, being successively Instrumentman on surveys, Central Area Draftsman, Chf. of Party on survey borings (5 months), assisting Inspector in charge of construction on Fittler new levee (about 4 months) and in charge of construction on Duckport new levee (since June 1930). *TT 1.9: SP 0.3: P 1.6: RC 1.3.—TT 5.9: SP 0.3: P 5.6: RC 1.3.* Refers to C. A. Baughman, J. A. C. Callan, W. E. Darrow, J. C. H. Lee, G. B. Stone.

752

(1) **MUSACCHIO, THOMAS VITO**, 197 Grant Ave., Brooklyn, N. Y. (Age 24. Born New York City.) 1931 C. E., Brooklyn Pol. Inst. *TT 4: P 4.* Refers to H. R. Codwise, H. P. Hammond.

753

(16) **NELSON, GEORGE WILLIAM**, R. R. No. 6, Richmond, Mo. (Age 26. Born Henrietta, Mo.) Student, Mo. School of Mines (Jan. 1926 to Jan. 1927 and Sept. 1928 to Jan. 1929) and Kansas State Teachers Coll. (Feb. to June 1928). *TT 0.5: P 0.5.*—April 1927 to Feb. 1928 and March to June 1929 Chainman Santa Fe R. R., drafting, high water and bridge inspection, acting as Levelman, etc. *TT 0.7: SP 0.4: P 0.3.*—Feb. to July 1928 Asst. to City Engr., Emporia, Kans., on plans and surveys, estimates and specifications, also Chf. Inspector of paving materials. *TT 0.5: P 0.5: RC 0.5.*—July to Sept. 1928 Rodman on survey, Jackson County Highway Association. *TT 0.2: P 0.2.*—Sept. 1928 to Feb. 1929 student and Laboratory Asst., U. S. Geological Survey, responsible for running water samples and computing. *TT 0.4: P 0.4: RC 0.4.*—Feb. to March 1929 Plotter, Missouri State Highway, plotting cross-sections, assisting Road Designer, drafting, etc. *TT 0.1: P 0.1.*—July to Sept. 1929 Constr. Engr., W. M. Kellogg Constr. Co., laying out oil stills, supervising excavations, concrete, etc. *TT 0.3: P 0.3: RC 0.3.*—Oct. 1929 to Jan. 1930 Rodman and Transittman, J. B. Converse Co., on preliminary survey and location of sea-wall, drafting, etc. *TT 0.3: P 0.3: RC 0.2.*—Feb. 1930 to date with U. S. Engrs., as Surveyman, in charge of party on Missouri River surveys, drafting, computing, estimating, mechanical analyzing of water samples, etc. *TT 1.5: P 1.5: RC 0.6.*—*TT 4.5: SP 0.4: P 4.1: RC 1.9.* Refers to C. E. Bardsley, C. M. Buck, A. C. Bux, J. O. Hunt, W. M. Spann, E. M. Stayton, H. M. Swope.

754

(13) **NOALL, JAMES WESLEY**, 327 Third Ave., Salt Lake City, Utah. (Age 22. Born Salt Lake City, Utah.) 1931 B. S. in Gen. Eng., Univ. of Utah. *TT 4: P 4.*—July 1931 to date in office of City Engr., Salt Lake City, Utah, on stream measurements.—*TT 4: P 4.* Refers to R. B. Ketchum, R. R. Lyman, A. B. Purton.

755

(11) **NOLAND, THOMAS JEFFERSON**, Jr., 3533 Beswick St., Los Angeles, Cal. (Age 24. Born Stratford, Tex.) 1929 B. S. in Eng., Cal. Inst. Tech. *TT 4: P 4.*—July 1929—Sept. 1930 Structural Draftsman, Transittman and Levelman, Western Pipe & Steel Co. of California. *TT 0.6: SP 0.6.*—Sept. 1930 to date Graduate Student in Civ. Eng., California Inst. of Technology.—*TT 4.6: SP 0.6: P 4.* Refers to E. Kalman, R. R. Martel, W. W. Michael, F. Thomas.

756

(9) **NORFORD, VIRGIL HAROLD**, 5864 Broadway, Indianapolis, Ind. Graduating student awarded Illinois Section prize. (Age 21. Born Fort Wayne, Ind.) 1931 B. S. C. E., Purdue Univ. *TT 4: P 4.*—Summers Laborer with Buesching, Hagerman & Co., Ft. Wayne, Ind., on reinforced concrete structures (1925) and Laborer on structural steel work (1927 and 1929) and Gang Foreman, supervising steel setting and erection (1930) Indiana Eng. & Constr. Co., Ft. Wayne. *TT 4: P 4.* Refers to W. K. Hatt, S. C. Hollister, W. A. Knapp, G. E. Lommel, G. P. Springer, R. B. Wiley.

757

(12) **NORRIS, CHARLES HEAD**, 350 East Fifty-sixth St. South, Portland, Ore. (Age 21. Born Pendleton, Ore.) 1931 B. S. in C. E., Univ. of Wash. *TT 4: P 4.*—Summers 1929 and 1930 with U. S. Bureau of Public Roads, successively as Chainman on road location, topography and Student Engr., Div. of Management, cost analysis studies on road construction.—*TT 4: P 4.* Refers to I. L. Collier, G. E. Hawthorn, C. C. More, R. G. Tyler.

758

(2) **NORTON, ROBERT ASHMALL**, 167 North Whittlesey Ave., Wallingford, Conn. (Age 22. Born Wallingford, Conn.) 1931 C. E., Rens. Pol. Inst. *TT 4: P 4.*—Sept. 1926 to June 1927 (while student) Rodman and Chainman with Borough Engr., Wallingford, Conn., on surveys.—*TT 4: P 4.* Refers to L. W. Clark, H. O. Sharp.

759

(1) **O'CONNELL, CONRAD WILLIAM**, Casilla 190, Oruro, Bolivia. (Age 29. Born Newark, N. J.) Studied Civ. and Concrete Eng. with International Correspondence School and Highway Eng. at Univ. of Wisconsin.—March-May 1922 Rodman with E. Halsey, Newark, N. J., on surveys. *TT 0.1: SP 0.1.*—June 1922—April 1923 Transittman and Draftsman with W. H. Hoff, Newark, on surveys, line and grade for construction of sewers, roads and water system in North Arlington, N. J. *TT 0.4: SP 0.4.*—May 1923—Feb. 1924 and May to Aug. 1926 Transittman and Chf. of Party, Town of Montclair, N. J., on surveys, line and grade for and inspection of construction of sewers, roads and water lines. *TT 0.7: SP 0.4: P 0.3.*—March—Oct. 1924 Civ. Engr. with O. A. D'Luhosch, Poughkeepsie, N. Y., in charge

of plans, estimates and construction of sidewalks and curbs (8 miles) in Grange of Arlington, N. Y. *TT 0.8: P 0.8: RC 0.8: D 0.8.*—Nov. 1924–March 1925 Inspector of Constr., Public Service Production Co., Newark, inspecting piling, reinforced concrete and steel erection on South Kearny power plant. *TT 0.2: SP 0.2.*—April 1925–April 1926 Chf. of Party with J. B. Acocello, Newark, on title surveys and plans and estimates for real-estate development. *TT 1.1: P 1.1.*—Aug. 1926–March 1928 Asst. Town Engr., Nutley, N. J., in charge of construction, design, surveys and inspection of sewers, pavements and water lines. *TT 1.6: P 1.6.*—April to Oct. 1928 Constr. Engr., A. J. Cook & Co., Bronx, N. Y., in charge of plans, estimates and construction on real-estate development. *TT 0.5: P 0.5: RC 0.5.*—Oct. 1928 to Aug. 1929 Asst. Engr., Bureau of Transit, Newark, being Chf. of Party and Inspector of testing borings, foundations and buildings. *TT 0.8: P 0.8.*—Aug. 1929 to date Chf. Engr. with The Foundation Co., Oruro, Bolivia, until Dec. 1929 in Lima office on design of water system, Jan.–April 1930 Asst. Engr. on construction of sewer system of Oruro, and since May 1930 Chf. Engr. on construction of sewer system and paving (100 blocks); designed paving *TT 2: P 2: RC 1.3: D 0.3.*—*TT 3.2: SP 1.1: P 7.1: RC 2.6: D 1.1.* Refers to C. L. Crandall, W. Greenalch, W. H. Hoff, D. Ramsay, R. Smillie, W. J. Spalding, E. Welle, L. S. Whipple.

760

(5) O'MELVENY, CHARLES WILLIAM, 2145 C St. N. W., Washington, D. C. (Age 32. Born Salt Lake City, Utah.) May 1917 to June 1919 Private (1st class), Co. D, 3d, U. S. Engrs., Schofield Barracks, Hawaii, being Rodman, Chainman, etc. on surveys. *TT 1: SP 1.*—July 1919 to Jan. 1922 Rodman, Instrumentman, Draftsman, etc., for various railroads, lumber companies, irrigation works, etc. *TT 1.8: SP 0.8: P 1.*—Jan. 1922 to Aug. 1923 Levelman, Draftsman and Computer, Western States Gas & Elec. Co., Placerville, Cal. *TT 1.7: P 1.7.*—Sept. 1923 to April 1924 Draftsman, Fresno (Cal.) City Water Corporation, assisted on layout and design of several pumping plants and on study of underground water resources. *TT 0.7: P 0.7: D 0.2.*—May 1924 to Aug. 1925 and March to Sept. 1926 Draftsman, Southern California Edison Co., Big Creek, on construction plant layouts, computations, estimating and minor design, and after March 1926 in charge of topographic mapping party, compiling and preparing topographic drawings of Florence Lake Reservoir and other projects. *TT 1.8: P 1.8: RC 0.5: D 0.2.*—Sept. 1925 to Feb. 1926 Chf. of Party, Key System Transit Co., Oakland, on track layouts, estimating, etc. *TT 0.5: P 0.5: RC 0.5.*—Jan. to June 1927 Recorder and Observer, City of Atlanta, Ga., first order triangulation under U. S. Coast and Geodetic Survey. *TT 0.3: SP 0.1: P 0.2: RC 0.2.*—June to Oct. 1927 Chf. of Party, Sherman Power Constr. Co., Bellows Falls, Vt., staking out work for hydro-electric construction, estimating, settling damage claims, computing, etc. *TT 0.3: P 0.3: RC 0.3.*—Oct. 1927 to July 1928 Draftsman and Topographer, City of Atlanta, Ga., on projection layouts, geodetic computations and in charge of plane-table party. *TT 0.9: P 0.9: RC 0.5.*—Aug. 1928 to March 1929 Senior Topographic Draftsman, Post Office Dept., Washington, D. C., correcting rural route maps. *TT 0.6: P 0.6.*—April 1929 to March 1930 Surveyman, U. S. Engr. Office, Washington, D. C., in charge of field parties on investigation of hydro-electric possibilities of Potomac River watershed, later on reconnaissance, selecting damsites, areas to be mapped, etc., and reporting on Monocacy, Conococheague, Great Corapon and other river valleys of Potomac River System. *TT 1: P 1: RC 1.*—March 1930 to date Asst. Phototopographic Engr., Aerotopographic Corporation of America, Washington, D. C., adjusting and operating the Hughschoff aero-cartograph, also computations, projection layouts, editing maps and studying stereo-aerial photographs for topographic forms and detail. *TT 1.3: P 1.3: RC 0.6.*—*TT 11.9: SP 1.9: P 10: RC 3.6: D 0.4.* Refers to C. H. Birdseye, R. C. Booth, W. L. Chadwick, R. F. Olds, B. B. Somervell.

761

(2) ORBANOWSKI, HORST HANS, 7 Whiton Ave., Quincy, Mass. (Age 23. Born Gross-Flottbeck, Germany.) 1931 B. S., Mass. Inst. Tech. *TT 4: P 4.* Refers to W. M. Fife, E. F. Miller, C. M. Spofford.

762

(13) PACCAGNELLA, CHARLES PAUL, 345 Hanover St., San Francisco, Cal. (Age 23. Born Turin, Italy.) 1931 B. S., Univ. of Cal. *TT 4: P 4.* Refers to R. E. Davis, C. Derleth, Jr.

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(10) PACKARD, DANIEL BERRY, Jr., 324 Broad St., Augusta, Ga. (Age 23. Born Washington, N. C.) 1931 B. S. in Civ. Eng., Ala. Pol. Inst. *TT 4: P 4.*—May 1931 to date Inspector, Charleston & Western Carolina Ry., on reconstruction of lower Savannah River Bridge. *TT 0.1: SP 0.1.*—*TT 4.1: SP 0.1: P 4.* Refers to C. A. Baughman, J. A. C. Callan.

764

(1) **PAIGE, EMMETT LESLIE**, 20 Clinton Place, Metuchen, N. J. (Age 23. Born East Rutherford, N. J.) 1931 B. Sc. in Civ. Eng., Rutgers Univ. *TT 4: P 4.* Refers to H. N. Lendall, W. Rudolfs.

765

(12) **PAQUETTE, JOSEPH ALBERT**, 199 Crescent St., Peterboro, Ont., Canada. (Age 27. Born Peterboro, Ont., Canada.) 1926 B. A. Sc., Univ. of Toronto. *TT 4: P 4.*—May to Aug. 1926 Draftsman with Corey & Essylstyn, Archts. and Engrs., Detroit, Mich. *TT 0.2: SP 0.2.*—Aug. 1926 to date Structural Designer, until June 1930 with Smith, Hinchman & Grylls, Detroit, and since then with Sydney E. Junkins, Cons. Engr., Vancouver, B. C., Canada; work included charge of flat-slab design on numerous flat-slab factory buildings for Kelvinator Corporation, Chrysler Motor Co., Berry Varnish Co., etc., on concrete and wind-bracing design for steel skeleton office buildings and exchanges for Michigan Bell Telephone Co., had charge of wind-bracing design (under Chf. Engr.) on 50-story Penobscot Bldg., Detroit, also checked steel drawings at fabricating plant, checked wind-bracing design, plans and shop drawings for Union Trust Bldg. (40 stories), Detroit, had charge of footing design, turbine supports, screen house, flumes, coal hoppers, etc. for first unit (about \$1 000 000) of power plant for Dow Chemical Co., Midland, Mich., and of steel design for sheds and head houses and worked on design and estimates for deep sea pier and ocean dock and its future development, at Vancouver, etc. *TT 4.8: SP 0.2: P 4.6: RC 2.7: D 4.6.*—*TT 9: SP 0.4: P 8.6: RC 2.7: D 4.6.* Refers to W. O. Andrews, A. W. Earl, S. B. Nevius, W. S. Wolfe, R. M. Wynne-Edwards.

766

(4) **PARKER, CHARLES VICTOR**, 305 Main St., Phoenixville, Pa. (Age 25. Born Shelby, Ohio.) 1931 B. C. E., Ohio State Univ. *TT 4: P 4.*—1927 to 1929 Jun. Engr., Illinois State Highway Dept., acting as Draftsman, and Inspector. *TT 0.6: SP 0.6.*—*TT 4.6: SP 0.6: P 4.* Refers to J. M. Montz, C. T. Morris, J. C. Prior, C. E. Sherman.

767

(12) **PARKER, FRANK WOODBURN**, 202 North Fifteenth St., Corvallis, Ore. Graduating student awarded Portland, Ore., Section prize. (Age 23. Born Olympia, Wash.) 1931 B. S. Ore. State Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

768

(10) **PARKS, LORNE CLEMENT**, Afton, Iowa. (Age 22. Born Agency, Iowa.) 1931 B. S., Iowa State Coll. *TT 4: P 4.*—May to Dec. 1927 and June to Dec. 1928 Chainman, Northern Pacific R. R., construction, maintenance, bridge inspection and drainage surveys. *TT 0.7: SP 0.7.*—Summer 1930 Transitman, Dallas County, in charge of preliminary survey on highway work.—*TT 4.7: SP 0.7: P 4.* Refers to W. L. Foster, A. H. Fuller.

769

(16) **PATTERSON, ROBERT SHEPHERD**, 508 Interstate Bldg., Kansas City, Mo. (Age 27. Born Dubuque, Iowa.) 1927 B. S. of C. E., and 1931 C. E., Univ. of Kans. *TT 4: P 4.*—Feb. 1923 to Feb. 1924 Draftsman, Kansas City (Mo.) Public Service Co., in office of Supt. of Way and Structures, on trackwork, structural steel, maps, yard structures, etc. *TT 0.5: SP 0.5.*—Feb. 1927 to Aug. 1928 with Burns & McDonnell Eng. Co., Kansas City, 1 year as Office and Designing Engr. and 6 months Superv. Engr., designing, detalling and tracing for water-works, sewers, etc. *TT 1.2: SP 0.2: P 1.*—Aug. 1928 to date with Stayton & Veatch, Cons. Engrs., Kansas City, Mo., 2 years as Bridge Designer, then Project Engr., on design, plans and supervision of construction of highway bridges for Jackson County, Mo., etc. *TT 2.5: SP 0.5: P 2: RC 1.5: D 1.*—*TT 8.2: SP 1.2: P 7: RC 1.5: D 1.* Refers to E. B. Black, W. G. Fowler, H. A. Rice, W. M. Spann, C. S. Timanus, N. T. Veatch, Jr.

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(13) **PAYNE, EUGENE BENNETT**, 6029 Harwood Ave., Oakland, Cal. (Age 24. Born Pueblo, Colo.) 1931 B. S., Univ. of Cal. *TT 4: P 4.*—March to Aug. 1926 Rodman, Bureau of Power & Light, Los Angeles, Cal.—March to Aug. 1928 Draftsman, Pacific Telephone & Telegraph Co., San Francisco, Cal., tracing, etc.—*TT 4: P 4.* Refers to C. Derleth, Jr., C. G. Hyde.

771

(13) **PEARCE, FRED OWEN**, 5880 Chabot Court, Oakland, Cal. (Age 33. Born Brighton, Colo.) 1920 A. B. in Arch., Univ. of Cal. *TT 4: P 4.*—June 1920 to date with K. E. Parker Co., Bldg. Contrs., San Francisco, Cal., until May 1921 as Timekeeper, May 1921 to June 1922 Aast. Engr. and Estimator and since June 1922 Chf. Engr. and Estimator in responsible charge of estimating, quantity surveying engineering and architectural work in connection with construction of buildings. *TT 10.1: SP 1: P 9.1: RC 9.1.*—*TT 14.1: SP 1: P 13.1: RC 9.1.* Refers to H. D. Dewell, W. L. Huber, E. M. Knapik, K. E. Parker, E. L. Soule.

772

(1) **PEARSON, JAMES THOMAS MORLEY**, 122 East Forty-Second St., New York City. (Age 41. Born Neiligh, Nebr.) Student, Civ. Eng. course, Univ. of Nebraska (Sept. 1907 to June 1908 and Feb. 1911 to Feb. 1913) and Bellevue (Nebr.) Coll. (Sept. to Dec. 1908). *TT 1.5: P 1.5.*—Summers 1907 and 1908 and Dec. 1908 to July 1909 with Chicago, Burlington & Quincy Ry. as Axman, Rodman, etc. *TT 1.1: P 1.1.*—Feb. to June 1913 Asst. Engr., Chicago, Milwaukee & St. Paul Ry., on construction in Aberdeen, S. Dak. *TT 0.3: P 0.3.*—June 1913 to Jan. 1914 Asst. Engr., Arizona & New Mexico Ry., on boundary survey, Clifton, Ariz. *TT 0.6: P 0.6: RC 0.6: D 0.6.*—July 1909 to Jan. 1911, summers 1911 and 1912 and March 1914 to May 1915 Instrumentman, Union Pacific Ry., on second-track and pipe-line construction, location, etc. *TT 1.1: P 1.1: RC 1.1.*—May 1915 to May 1917 Computer, Interstate Commerce Comm., on railway valuation, Kansas City, Mo. *TT 2: P 2: RC 2.*—May 1917 to Oct. 1919 with U. S. Army, until Dec. 1917 as First Lieut., then Capt., Engr. Corps, Hawaii and Virginia. *TT 2.5: P 2.5: RC 2.5.*—1920 Highway Engr., Cheyenne County, Nebr., on highway construction. *TT 1: P 1: RC 1: D 1.*—1921 in private practice in Nebraska. *TT 0.9: P 0.9: RC 0.9: D 0.9.*—Dec. 1921 to Aug. 1929 with U. S. Veterans Bureau, until March 1922 as Rehabilitation Asst., being Supervisor of training, St. Louis; March 1922 to March 1923 Supervisor of training Omaha; March 1923 to March 1924 Mgr., Sub Dist. Office, St. Louis; March 1924 to March 1925 Executive Officer, 2nd Dist., New York City; March 1925 to Aug. 1927 Asst. Control Officer, Areas A & B, New York City, after Aug. 1927 Chf., Survey Sec., Constr. Div., Washington, D. C., in charge of annual inspections of hospital structures and equipment, including special engineering investigation. *TT 7.7: P 7.7: RC 7.7: D 1.*—Oct. 1929 to date with Shell Eastern Petroleum Products, Inc., until Feb. 1930 as Dist. Engr., in charge of construction and distribution projects in New York, then in the Home Office, Boston, Mass., and New York City, 4 months as Asst. Chf. Engr., and since June 1930 Chf. Engr., covering all engineering activities in 14 seaboard states. *TT 1.7: P 1.7: RC 1.7: D 1.7.*—*TT 20.4: SP 1.1: P 19.3: RC 17.5: D 5.2.* Refers to R. L. Cochran, P. M. McCullough, C. E. Mickey, G. M. Shepard, C. A. Shockley, J. G. Steese, O. V. Stout, M. P. Taylor.

773

(1) **PENHUNE, PAUL**, 42-44 Marathon Parkway, Little Neck, N. Y. (Age 30. Born London, England.) 1920 A. C. G. I., City & Guilds Inst. and B. Sc., London Univ. *TT 4: P 4.*—July 1920 to July 1922 with J. I. Thornycroft, Ltd., Basingstoke, England, laboratory research, general shop erection on large sugar-refining plant. *TT 1: SP 1.*—Nov. 1922 to April 1925 Draftsman, Palisades Interstate Park Comm., also Instrumentman and Inspector on steel erection and pile driving for two overhead b'ldges at Bear Mountain, N. Y. *TT 2.5: P 2.5.*—April 1925 to Dec. 1927 with Turner Constr. Co., New York City, as Draftsman on reinforced concrete buildings and Checker on Warren Nash Bldg., checking shop details, issuing requisitions, expediting material in shop and contact man with architects. *TT 2.7: P 2.7.*—Dec. 1927 to Dec. 1928 Bridge Designer, Long Island R. R. Co., on elimination work, eight bridges in Long Island, two freight houses in Long Island City (total \$800 000), also checking designs and shop details. *TT 1: P 1: D 1.*—Dec. 1928 to date with Pennsylvania R. R. Co., as Bridge Designer on six bridges in New Jersey and Pennsylvania (total \$500 000) and Supervising Draftsman, directing activities of office squad on 1 000-ft. pier and 5-story Hog Abattoir in Jersey City, Rockaway Beach elimination (3 miles of viaduct), 3 plate girder spans in Long Island, designs for removal of 30 columns below U. S. Post Office and Eighth Ave. Subway, plans for installation of mall conveyor system (\$1 000 000) in Pennsylvania Terminal. *TT 2.5: P 2.5: RC 1.7: D 2.5.*—Since 1923 (at various times) also employed by various architects and consulting engineers.—*TT 13.7: SP 1: P 12.7: RC 1.7: D 3.5.* Refers to H. G. Altvater, F. Auryansen, H. D. Bowman, A. J. Fearing, H. G. Hauck, A. B. Heiser, U. J. Holst, L. F. Kleen, A. C. Stiefel.

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(16) **PEOPLES, HAROLD DENTON**, 1015 North Seventh St., Garden City, Kans. (Age 26. Born Skidmore, Mo.) B. S. in Education, and 1931 B. S. in Eng., Univ. of Ill. *TT 4: P 4.* Refers to J. J. Doland, W. C. Huntington, J. Vawter.

775

(8) **PETERSON, CARL HAROLD**, 7935 Parnell Ave., Chicago, Ill. Graduating student awarded Central Illinois Section prize. (Age 25. Born Chicago, Ill.) 1931 B. S. in C. E., Univ. of Ill. *TT 4: P 4.*—March 1926 to Sept. 1927 Rodman, South Park Comms. of Chicago. *TT 0.7: SP 0.7.*—*TT 4.7: SP 0.7: P 4.* Refers to J. J. Doland, W. C. Huntington, T. C. Shedd, F. W. Stubbs, Jr., J. Vawter.

776

(15) **PFAU, RALPH LESLIE**, U. S. Coast and Geodetic Survey, Washington, D. C. (Age 30. Born Cincinnati, Ohio.) 1924 B. S. in C. E., Tex. Agri. and Mech. Coll. *TT 4: P 4.*—

July-Aug. 1924 Hydrographer, Water Resources Div., U. S. Geological Survey, on stream gauging and rating. *TT 0.2: P 0.2.*—Sept. 1924 to date with U. S. Coast and Geodetic Survey, until March 1925 as Jun. Engr., being Asst. on triangulation along Potomac River and in vicinity of Charleston, S. C., geodetic computations; March 1925 to Dec. 1927 Aid and Jun. Hydrographic and Geodetic Engr. on ship *Pioneer*, being Topographer and Asst. Hydrographer on surveys of Ikatan and Belkofsky Bays, Alaska, and Jun. Hydrographer on launch and ship hydrography, California and Oregon coasts; Dec. 1927 to July 1929 Jun. Hydrographic and Geodetic Engr., in charge of observing party on triangulation and traverse along coast of California and Oregon (6 months) and in Iowa, Missouri and Arkansas (about 5 months) and in Washington office on geodetic and astronomic computations, being Observer and Computer on transfer of gravity base station from Coast Survey Bldg. to Smithsonian Inst. (over 8 months); since July 1929 Chf. of Party, about 7 months on precise determination of latitude, longitude and azimuth at Laplace stations in seven states, 3 months in Washington office on astronomical computations, etc. and Asst. on investigation for development of methods for determining astronomical positions with second order accuracy with a theodolite, 7 months on precise determination for latitude and longitude at Laplace stations in eight states, 3 months on reconnaissance and observations for connection between first order triangulation scheme of United States and Mexico, in vicinity of El Paso, Tex., and since April 1931 on first order triangulation using high portable steel towers and double observing party, Louisiana and Mississippi. *TT 6.7: P 6.7: RC 1.9: D 0.1.*—*TT 10.9: P 10.9: RC 1.9: D 0.1.* Refers to H. G. Avers, W. Bowie, C. L. Garner, E. O. Heaton, H. W. Hemple, R. F. Luce, C. M. Thomas.

777

(5) **PFEFFER, CHARLES RING**, 309 Broxton Rd., Baltimore, Md. (Age 21. Born Baltimore, Md.) 1931 B. E., Johns Hopkins Univ. *TT 4: P 4.*—Summer 1927 and June 1928 with Empire Constr. Co., as Field Clerk at Halthorpe, Md., finally in charge of field office, and (1928) Storekeeper, in charge of store room at Hansrote, W. Va.—Summer 1930 Draftsman, The Arundel Corporation, on drawings, computations, calculations, etc.—*TT 4: P 4.* Refers to T. F. Comber, Jr., J. H. Gregory, T. F. Hubbard, F. W. Medaugh, J. T. Thompson.

778

(12) **PHILPOTT, EUEL FRANCIS**, Fifteenth and Van Buren St., Corvallis, Ore. Graduating student awarded Portland, Ore., Section prize. (Age 29. Born Irma, Mo.) 1931 B. S., Ore. State Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

779

(1) **PIERLEONI, CARL**, 749 Coster St., New York City. (Age 30. Born Naples, Italy.) Licensed Professional Engr., State of New York, 1922 C. E., Royal Pol. School of Naples. *TT 4: P 4.*—1922 to 1923 with Italian Army.—1923 to 1925 brick and masonry contracting, also miscellaneous designing on apartment houses and garages. *TT 1.5: SP 0.5: P 1: RC 1: D 1.*—1925 to date with Clemente Contr. Co., Inc., New York City, until 1929 as Asst. Engr. on design and construction of inclinator plant, various apartment houses, New Jersey State Highway Bridge and viaducts at Port Newark and Jersey City; since 1929 Vice-Pres., being Engr., in charge of design and estimating underpinning, shoring, temporary timbering, etc., in connection with construction of Sec. 3, Route 106, New York City subway (\$4 800 000), also on relief sewer for President of Borough of Bronx (\$780 000, under construction). *TT 5: SP 1: P 4: RC 4: D 1.*—*TT 10.5: SP 1.5: P 9: RC 5: D 3.* Refers to A. E. Clark, J. J. Cope, C. F. Giraud, G. L. Lucas, J. R. Monaghan, R. Ridgway.

780

(8) **PILLSBURY, CHARLES STEPHEN**, 10415 S. Seeley Ave., Chicago, Ill. (Age 44. Born Springfield, Ill.) 1907 A. B., 1908 B. S., and 1911 M. E., Univ. of Ill. *TT 4: P 4.*—1908 to date (except 1917 to 1919 First Lieut., Capt., Constr. Div., Air Service, and Major, Engrs., U. S. Army) with Chicago (Ill.) Bridge & Iron Works, until 1917 successively as Draftsman, Estimator, Sales Engr. and Asst. Gen. Sales Mgr., and since 1919 Mgr. of Operation, in charge of plants and drafting rooms at Chicago, Greenville, Pa. and Birmingham, Ala.; since March 1929 also in charge of erection work. *TT 21.6: SP 1: P 20.6: RC 15.2: D 4.*—*TT 25.6: SP 1: P 24.6: RC 15.2: D 4.* Refers to C. B. Burdick, J. N. Chester, T. L. Condron, G. T. Horton, M. S. Ketchum, A. N. Talbot, M. J. Trees.

781

(1) **PIPPARD, ALFRED JOHN SUTTON**, 9 Victoria Sq., Clifton, Bristol, England. (Age 40. Born Yeovil, Somerset, England.) 1911 B. S. in Civ. Eng., and 1920 D. S., Univ. of Bristol. *TT 4: P 4.*—1907 to 1908 Pupil with Bellamy, James & Laycock, Yeovil, Somerset. *TT 0.6: SP 0.6.*—Oct. 1911 to Oct. 1913 Articled Asst. with A. P. I. Cotterell, Bristol and London, England. *TT 1: SP 1: D 1.*—Nov. 1913 to Dec. 1914 Eng. Asst., Pontypridd and Rhondda Joint Water Board, Pontypridd. *TT 1.2: P 1.2.*—Feb. 1915 to March 1919 with Admiralty and Air Ministry in charge of work dealing with structural safety of airplanes and seaplanes.

TT 4: P 4: RC 3.—April 1919 to Nov. 1922 member of firm., Ogilvie & Partners, Ltd., Cons. Aeronautical Engrs., High Holborn, London, in charge of structural work, inspected special steel strip for development of metal aircraft in United States, and approved aircraft purchased by Japanese Navy and private firms, was member of Investigation Comm. on disaster to Airship R 38, and was retained by British Air Ministry to investigate structural design of airships; firm acted as Cons. Engrs. to several new Air Lines, and as Assessors for aircraft insurance firms. TT 3.6: P 3.6: D 3.6.—Nov. 1922 to Sept. 1928 Prof. of Eng., Univ. of Wales, and Sept. 1928 to date Prof. of Eng., Univ. of Bristol; past 9 years has done considerable consulting work in aeronautical engineering, made design of large multiple steel wing for Bristol Development Co., etc. TT 8.6: P 8.6: RC 8.6.—TT 23: SP 1.6: P 21.4: RC 11.6: D 4.6. Refers to D. Anderson, R. Freeman, E. W. Moir, W. W. Pagon, R. E. Stradling.

782

(8) PIROK, JOHN NICHOLAS, 1017 Madison St., Staunton, Ill. Graduating student awarded Central Illinois Section prize. (Age 27. Born Assumption, Ill.) 1931 B. S. in Arch. Eng., Univ. of Ill. TT 4: P 4.—Summer 1930 Checker of fabricated structural steel, Nashville (Tenn.) Bridge Co.—TT 4: P 4. Refers to J. J. Doland, A. J. Dyer, M. L. Enger, H. H. Jordan, M. S. Ketchum, N. D. Morgan, C. E. Palmer, A. N. Talbot.

783

(1) POLI, THOMAS, 56 West One Hundred-Sixth St., New York City. (Age 24. Born New York City.) 1931 B. S. in Civ. Eng., Cooper Union. TT 4: P 4.—1929 to 1931 Estimator, Illinois Zinc Co., on corrugated material for roofing and siding.—May 1931 to date Jun. Asst. Civ. Engr., Grade 1 (Field), Div. of Highways, State Dept. of Public Works, with party supervising installation of water-supply system, testing pipes under pressure, acting as Rodman and Chainman on surveying and plotting up notes. TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4. Refers to F. E. Foss, J. P. J. Williams.

784

(11) PORE, FRANK WALDO, 500 Klinker Bldg., Los Angeles, Cal. (Age 32. Born New Stark, Ohio.) 1923 B. S. in Civ. Eng., Purdue Univ. TT 4: P 4.—Aug. 1923 to April 1924 Jun. Draftsman, Los Angeles County Regional Planning Comm., general drafting on layout of highways and subdivisions. TT 0.6: P 0.6.—April to May 1924 Transitman with T. E. Perrin, Surveyor, Los Angeles, Cal. TT 0.1: P 0.1.—June 1924 Levelman, U. S. Bureau of Public Roads, on mountain road relocation. TT 0.1: P 0.1.—July 1924 to date Deputy County Surveyor, Los Angeles County, drafting and calculating for public improvement assessment maps, since 1928 being in charge of Assessment Div., under Chf. Deputy, on engineering investigations of benefits derived from paving, water and sanitary sewer systems, storm drains, etc. TT 7: P 7: RC 4.4.—TT 11.8: P 11.8: RC 4.4. Refers to F. D. Bowlus, E. A. Burt, W. F. Foster, A. Jones, O. D. Keese, H. W. Slavin.

785

(7) PORTER, EARL LEONARD FRANKLIN, Center City, Minn. Graduating Student awarded Northwestern Section prize. (Age 30. Born Center City, Minn.) 1931 B. C. E., Univ. of Minn. TT 4: P 4.—March 1931 to date Draftsman, Minnesota State Highway Dept. TT 0.2: SP 0.2.—TT 4.2: SP 0.2: P 4. Refers to F. Bass, A. S. Cutler.

786

(2) POTTS, CHARLES EDWARD, Jr., 69 Church St., West Haven, Conn. (Age 22. Born New Haven, Conn.) 1931 B. S., Sheffield Sci. School, Yale Univ. TT 4: P 4. Refers to P. G. Laurson, J. C. Tracy.

787

(11) POWELL, CARL ALDEN, 755 City Hall, Los Angeles, Cal. (Age 31. Born Battle Creek, Mich.) Registered Civ. Engr., State of California. 2d Lieut., 316th Engrs., U. S. Army (Reserve). July to Nov. 1922 Mech. Draftsman, Halsey Machine Works, San Bernardino, Cal., patent development, design and fabrication of steam pump, automatic air- and water-dispensing device for service stations, casket lift. TT 0.3: P 0.3.—Dec. 1922 to July 1925 Engr.-Draftsman, United Verde Copper Co., Jerome, Ariz., on design of mine and mechanical structures, houses, buildings, townsite layout, cost estimating; 6 months Rodman on U. G. surveys. TT 2.4: SP 0.3: P 2.1.—Oct. 1925 to date Jun. Civ. Engr., Eng. Dept., Los Angeles, Cal., on storm drain design including drainage map, assignment of coefficients, hydraulic design of conduit, catch basins, etc., plans, structural design of sections, runoff and rainfall curve studies, etc., on sewer design, mainly checking plans of local and intercepting sewers in Venice area, design of streets, etc.; 1 year Squad Leader. TT 5.8: P 5.8: RC 5.—TT 8.5: SP 0.3: P 8.2: RC 5. Refers to L. W. Armstrong, B. O. Badgley, E. H. Clarkson, Jr., E. D. Lownes, W. D. Potter, R. A. Skinner, G. S. Tapley.

788

(3) POZE, SAMUEL, 80 Huntington Park, Rochester, N. Y. (Age 22. Born Denver, Colo.) 1931 B. S., Sheffield Sci. School, Yale Univ. *TT 4: P 4.* Refers to C. T. Bishop, J. C. Tracy.

789

(16) PRATER, HERBERT E., 3712 State Line, Kansas City, Kans. Graduating student Awarded Kansas State Section prize. (Age 23. Born Kansas City, Kans.) 1931 B. S. in C. E., Univ. of Kans. *TT 4: P 4.* Refers to E. Boyce, J. O. Jones, R. E. Lawrence, W. C. McNow, H. A. Rice, F. A. Russell.

790

(2) PRESTINI, VERO ERNEST, 131 Granite St., Westerly, R. I. (Age 22. Born Westerly, R. I.) 1931 B. S., Sheffield Sci. School, Yale Univ. *TT 4: P 4.* Refers to C. T. Bishop, J. C. Tracy.

791

(3) RANDIG, WESLEY HERBERT, 80 Pinewoods Ave., Troy, N. Y. (Age 28. Born Springfield, Mass.) 1927 U. S. Naval Acad. 1930 commissioned in Civ. Engr. Corps, U. S. Navy. 1930 C. E., Rens. Pol. Inst. *TT 4: P 4.*—May 1923 to July 1924 Gen. Eng. Asst., Water Dept., Springfield, Mass., acting as Rodman and Recorder, drafting, computing, etc. *TT 0.6: SP 0.6.*—Aug. 1927 to July 1928 Asst. Repair Officer, S. S. *Medusa* (repair ship), U. S. Navy, acting as Gen. Line Officer and coordinating and routing work through repair shops, etc.; at present Lieut. (j.g.). *TT 1: P 1.*—*TT 5.6: SP 0.6: P 5.* Refers to T. R. Lawson, E. E. Lochridge.

792

(13) RANKIN, ARDERY ROBERT, Box 869, San Jose, Cal. (Age 21. Born Fairfield, Ill.) 1931 B. S., Ore. State Agri. Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

793

(1) REANTILLO, TEOFILO PASCUA, 19 Bryan Place, Jersey City, N. J. (Age 28. Born Philippine Islands.) Student in Civ. Eng., Univ. of the Philippines (3 years), Columbia Univ. (1 term) and Brooklyn Polytechnic Inst. (Jan. 1925 to June 1926). *TT 0.5: P 0.5.*—Summers 1921-1923 with Government of Philippine Islands, 3 months as Surveyor and 6 months Chf. of Party, survey of water-works.—1926 to 1927 Draftsman, Hilier Eng. Constr. Co., Brooklyn, N. Y., acting as Structural Draftsman and Designer and laying out plans of buildings. *TT 1: P 1.*—1927 to 1928 Draftsman, Air Reduction Co., New York City, acting as Structural Draftsman and Detailer. *TT 1: P 1.*—1928 to 1929 Structural Draftsman and Designer, Taylor Fichter Steel Co., New York City, detailed and designed columns, plate girders and trusses of tall buildings, churches and office buildings. *TT 1: P 1: D 1.*—1929 to 1930 Structural Designer, successively with Reliance Structural Steel Fabricators, Brooklyn, and Litchenburgh Eng. Co., New York City, designed and detailed trusses and columns of schools and apartment houses, columns and plate girders of tall buildings and schools, checked shop detail. *TT 0.7: P 0.7: D 0.5.*—1930 to date Bridge Draftsman and Designer, New Jersey State Highway Dept., Jersey City, designing trusses of bridges and checking designs and stresses. *TT 1: P 1: RC 1: D 1.*—*TT 5.2: P 5.2: RC 1: D 2.5.* Refers to J. C. Engelhart, H. P. Hammond, S. Johannesson, E. J. Squire, J. C. Van der Mey.

794

(1) RECK, JAMES HAROLD, Briar Cliff Manor, N. Y. (Age 25. Born Troy, N. Y.) Nov. 1924 to Jan. 1926 and Oct. 1926 to April 1927 Rodman, Title Guarantee & Trust Co., rod. chain and transit work on surveys, stakeouts, building lines, cross-sections, etc. *TT 1: SP 0.7: P 0.3.*—Jan.-June 1926 Line and Grade Man, Godwin Constr. Co., on foundations. *TT 0.2: SP 0.2.*—July 1928 to date Jun. Asst. Engr., Westchester County Highway Dept., on road construction, line, grade and road-building inspection. *TT 3: P 3.*—*TT 4.2: SP 0.9: P 3.3.* Refers to T. A. Avery, H. P. Barnes, C. Hyatt, C. MacDonald, D. D. Thomson.

795

(14) REIMAN, WALTER ALBERT, 1720 Park Avenue., Little Rock, Ark. (Age 22. Born Little, Ark.) 1931 B. S. in C. E., Univ. of Colo. *TT 4: P 4.* Refers to R. L. Downing, C. L. Eckel.

796

(7) REY, RICHARD FRANKLIN, 724 West Ionia St., Lansing, Mich. (Age 32. Born Dimondale, Mich.) Registered Civ. Engr., State of Michigan. 1921 B. S. in Eng., and 1927 C. E., Mich. State Coll. *TT 4: P 4.*—June 1921 to date with Eng. Dept., Lansing, Mich., until Sept. 1924 as Civ. Engr. (1½ years) and Asst. Engr. (17/10 years) designing, estimating and supervising construction of sewers, pavements, bridges, etc.; Sept. 1924 to Sept. 1926 Structural Engr., and since Sept. 1926 City Structural Engr., in charge of design and construction of bridges, grade separations, public buildings, etc.; since 1923 bridges and grade separations designed and constructed under supervision of the Department consisted of Pennsylvania Ave., Seymour St., Saginaw St., Island Ave. and Grand River Ave. Bridges (total

\$1 445 000), Shiawassee St., Kalamazoo St. and Logan St. bridges and viaducts (total \$880 000), and River St., Michigan Ave. and Washington Ave. bridge superstructures (total \$90 000). *TT 9.3: SP 0.8: P 8.5: RC 6.8: D 4.8.—TT 13.3: SP 0.8: P 12.5: RC 6.8: D 4.8.* Refers to C. L. Allen, W. Bintz, C. M. Cade, H. L. Conrad, F. A. Gould, C. A. Melick, J. E. Payne, J. H. Wasson.

797

(12) **RITCHIE, OSCAR THOMAS**, 3124 North Twenty-seventh St., Tacoma, Wash. (Age 23. Born Dawson, Y. T.) 1931 B. S., Wash. State Coll. *TT 4: P 4.* Refers to H. E. Phelps, M. K. Snyder.

798

(1) **ROBERTI, LOUIS E. J.**, 847 East 218th St., New York City. (Age 22. Born New York City.) 1929 A. B., 1930 B. S. and 1931 C. E., Columbia Univ. *TT 4: P 4.* Refers to A. H. Beyer, D. M. Burmister, J. K. Finch, W. J. Krefeld, C. R. Wyckoff.

799

(4) **ROBERTS, CYRUS MARION**, 1527 East Gibson St., Scranton, Pa. (Age 42. Born Scranton, Pa.) Registered Prof. Engr. and Land Surveyor, State of Pennsylvania. 1907 to 1911 Chainman, Rodman, Levelman and Transitman, Pennsylvania Coal Co., Scranton, Pa., Scranton Gas & Water Co. and (1 year) with Scranton-Binghamton R. R. on 65-mile preliminary location and construction, Factoryville to Binghamton, N. Y. *TT 2: SP 2.—1911 to 1918 Transitman and Draftsman, Bureau of Eng., Scranton, paving, sewers, bridges, etc. TT 3.5: SP 3.5.—1918 to 1919 Colliery Engr., Glen Alden Coal Co., Scranton, in charge of two collieries, making extensions and directing work, also supervising construction of steel and glass breaker (\$1 000 000). TT 2: P 2.—1920 to date with Bureau of Eng., Scranton, until 1926 as Third Asst. City Engr., in charge of outside work, winters designing plans for paving, sewers, bridges, etc., and after 1926 First Asst. City Engr., in charge of office work, including supervision of second and third engineers, having direct charge of office supervision over all plans and specifications. TT 11: P 11: RC 5.—TT 18.5: SP 5.5: P 13: RC 5.* Refers to L. A. Idle, R. D. Richardson, G. B. Walker, T. R. Williams, F. G. Wolfe.

800

(11) **ROBINSON, HARLAN BAIRD**, 346 Palmetto Drive, Pasadena, Cal. (Age 22. Born Pasadena, Cal.) 1930 B. S. in Eng., Princeton Univ. *TT 4: P 4.—*Summers 1927 and 1929 Rodman, Delaware & Hudson Ry. (Student Camp) and Grand Trunk Western Ry.—Sept. 1930 to June 1931 Teaching Fellow, California Institute of Technology.—*TT 4: P 4.* Refers to G. E. Beggs, F. H. Constant, R. R. Martel, F. Thomas.

801

(9) **ROSE, EDWIN**, 1240 Delta Ave., Cincinnati, Ohio. Graduating student awarded Cincinnati Section prize. (Age 23. Born Cincinnati, Ohio.) 1931 C. E., Univ. of Cin. *TT 4: P 4.—*June 1926 to date (co-operative work) until Feb. 1927 as Laborer and Timekeeper with H. L. Brite, Bridge Contr., Feb. 1927 to Jan. 1928 Laborer, Timekeeper and Carpenter with Brewer & Brewer Sons, on highway and street work, Jan. 1928 to Jan. 1929 Asst. with Whitman, Requaardt & Smith, Cons. Engrs., on appraisal for United Gas & Elec. Co. and since Jan. 1929 Rodman and Transitman, Cincinnati Union Terminal Co., on survey, railroad and highway layouts, bridge construction and grading.—*TT 4: P 4.* Refers to J. M. Belknap, G. E. Halstead.

802

(14) **ROSE, JESSE EUGENE**, Henderson, Tenn. (Age 33. Born Hickory Valley, Tenn.) July 1920 to Jan. 1921 Rodman on drainage work and city improvement under W. C. Kelly, Union City, Tenn. *TT 0.2: SP 0.2.—*Jan. 1923 to July 1924 Instrumentman on highway construction and Inspector on concrete slab and drainage structures, under J. C. McCullen, Jackson, Tenn. *TT 0.8: SP 0.8.—*July 1926 to Oct. 1928 Constr. Supt. in charge of construction of concrete deck girder bridges, steel trusses and small concrete structures, F. G. Hall, Constr. Co., Nashville, Tenn. *TT 2.3: P 2.3: RC 2.3.—*Sept. 1919 to date (except July 1920 to Jan. 1921, Jan. 1923 to July 1924 and July 1926 to Oct. 1928) with Tennessee Highway Dept., until Jan. 1920 as Rodman, Jan. to July 1920 Inspector on laying of gravel and building of concrete culverts, Jan. 1921 to July 1924 Instrumentman on highway construction and location and (1½ years) also Inspector on concrete slab and drainage structures, July 1924 to Jan. 1926 Acting Jun. Engr., Jan. to July 1926 and since Oct. 1928 Jun. Engr., in charge of highway construction, grading, bridges and paving. *TT 6.1: SP 1.4: P 4.7: RC 4.7.—TT 9.4: SP 2.4: P 7: RC 7.* Refers to E. W. Bauman, C. W. Butts, J. E. Moreland, J. L. Neely, Jr., F. S. Parrigin, Z. B. Thompson.

803

(13) **RYAN, JOHN HENRY**, Care, Hetch Hetchy Water Supply, Livermore, Cal. (Age 42. Born San Francisco, Cal.) Registered Civ. Engr., State of California.—1907–1909 student in Civ. Eng., St. Ignatius Univ., San Francisco, and 1909–1910 student, Leland Stanford, Jr.

Univ. *TT 0.5: P 0.5.*—Jan. 1911 to June 1913 and July 1914 to Dec. 1917 with Eng. Dept., City of San Francisco, Cal., until June 1913 as Inspector and later Res. Engr. on location, lines, grades, inspection and direction of work on 96 miles of high-pressure water pipe, and after July 1914 on construction of Twin Peaks Tunnel (railroad), inspection, line and grade and placing reinforced concrete. *TT 3.5: SP 3.5.*—July 1913 to June 1914 Instrumentman and Inspector, City and County of San Francisco, on construction of street railway system (municipal). *TT 0.5: SP 0.5.*—Jan. 1918 to June 1919 1st Lieut., of Engrs., U. S. Army, 14 months in France with 464th Engrs. and 4 months in United States with 116th Engrs. *TT 0.7: SP 0.7.*—July 1919 to June 1923 Prin. Asst. to Chf. Engr., Eng. Dept., San Francisco, Cal., on Hetch Hetchy Water System, directing building of 18 miles of water tunnel with finished concrete lining. *TT 4: P 4: RC 4.*—July 1923 to June 1925 Gen. Supt., Construction Co. of North America, directing construction of water tunnels on upper Hetch Hetchy Water System, Groveland, Cal. *TT 2: P 2: RC 2.*—July 1925 to June 1927 Supt. and Asst. Engr., Blue Line Constr. Co., directing construction on contract work for earth-fill in San Francisco harbor, grading and reclamation, and road work and foundations in Santa Cruz, Cal. *TT 2: P 2: RC 2.*—July 1927 to June 1928 partnership with Villadsen Bros., Contrs., directing and supervising construction of three reinforced concrete bridges. *TT 1: P 1: RC 1.*—Aug. 1928 to date Prin. Asst. to Constr. Engr., Eng. Dept., City of San Francisco, directing construction on 28 miles of Hetch Hetchy water tunnel. *TT 3: P 3: RC 3.*—*TT 17.2: SP 3.7: P 13.5: RC 13.* Refers to L. Aldrich, A. J. Cleary, N. A. Eckart, J. H. Hampson, L. T. McAfee, M. M. O'Shaughnessy, C. R. Rankin.

804

(1) SAVARESE, LOUIS BERNARD, 19 Eighth Ave., New York City. (Age 23. Born New York City.) 1931 B. S. in Civ. Eng., N. Y. Univ. *TT 4: P 4.* Refers to E. G. Hooper, C. T. Schwarze.

805

(2) SAWYER, ROBERT WILLIAM, Jr., Ashland, Me. (Age 25. Born Winchester, Mass.) 1930 S. B. in Civ. Eng., and 1931 M. S. in Eng. (San.) Harvard Eng. School. *TT 4: P 4.*—Oct. 1927 to July 1928 Instrumentman, Gould Elec. Co. of Presque Isle, Me., on hydro-electric development. *TT 0.3: SP 0.3.*—*TT 4.3: SP 0.3: P 4.* Refers to G. M. Fair, A. Haertlein, L. J. Johnson.

806

(9) SCHOTT, EUGENE ALBERT, 1011 North Walnut St., Dover, Ohio. (Age 22. Born Dover, Ohio.) 1931 B. S. C. E., Ohio Northern Univ. *TT 4: P 4.* Refers to G. H. Elbin, A. R. Webb.

807

(8) SEAL, BENJAMIN CALLISON, Farmer City, Ill. (Age 26. Born Dewitt, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.*—Summer 1926 Spot Welder, Budd Body Co., Philadelphia, Pa.—Aug. to Oct. 1928 Designer, Mueller Brass Co., Decatur, Ill. *TT 0.1: SP 0.1: D 0.1.*—Nov. 1928 to Sept. 1929 Levee Inspector, New Orleans (La.) River Dist. *TT 0.4: SP 0.4.*—Summer 1930 Computer, W. N. Brown Eng. Co., Washington, D. C.—*TT 4.5: SP 0.5: P 4.* Refers to J. J. Doland, W. C. Huntington, G. W. Pickels, T. C. Shedd, C. C. Wiley.

808

(12) SHARKEY, FRED JOHN, Columbia Hotel, Wenatchee, Wash. (Age 45. Born Spokane, Wash.) 1908 B. S. in M. E., Univ. of Wash. *TT 4: P 4.*—June to Oct. 1908 Rodman on surveys, etc., at Treadwell mines, Douglas, Alaska. *TT 0.1: SP 0.1.*—Nov. 1908 to March 1909 Machine Runner in mine of Chemung Copper Co., Tyrone, N. Mex. *TT 0.1: SP 0.1.*—March 1909 to Sept. 1910 and Jan. 1911 to Dec. 1912 Asst. City Engr., Yakima, Wash. *TT 2.3: SP 0.9: P 1.4: RC 0.8: D 0.6.*—Sept. to Dec. 1910 Field Draftsman on location, Oregon Trunk Ry. *TT 0.2: SP 0.2.*—Jan. to Dec. 1913 Asst. City Engr., in charge of construction of pavement, sewer, etc., and Jan. 1914 to April 1917 City Engr., Wenatchee, Wash. *TT 1: P 1: RC 1: D 0.4.*—Sept. 1919 to May 1920 Constr. Engr., Fred T. Ley Co., Springfield, Mass., on building construction in Boston, Mass. *TT 0.3: SP 0.3.*—July 1920 to Feb. 1925 private practice, Wenatchee, on design and construction of two irrigation projects, two earth-fill dams and general engineering and surveying. *TT 4.5: P 4.5: RC 4.5: D 1.*—Feb. 1925 to date City Engr., Wenatchee. *TT 6.5: P 6.5: RC 6.5: D 2.*—*TT 22.3: SP 1.6: P 20.7: RC 16.1: D 4.5.* Refers to A. D. Butler, H. J. Doolittle, C. D. Forsbeck, H. M. Hadley, J. Jacobs, C. E. Putnam, C. N. Reitze, W. D. Shannon, R. H. Thomson, W. F. Way.

809

(15) SHELBY, JOE AUBREY, 1114 West Ninth St., Austin, Tex. (Age 23. Born Austin, Tex.) 1931 B. S. in C. E., Univ. of Tex. *TT 4: P 4.* Refers to J. A. Focht, T. U. Taylor.

810

- (1) SHELLARD, GORDON DURYEA, 420 Mountain Ave., Ridgewood, N. J. (Age 21. Born Brooklyn, N. Y.) 1931 B. S., Mass. Inst. Tech. *TT 4: P 4.* Refers to J. B. Babcock, 3d, C. B. Breed, W. M. Fife, G. E. Russell, C. M. Spofford.

811

- (13) SHOAF, ROSS TAYLOR, 76 Collingwood St., San Francisco, Cal. (Age 23. Born San Francisco, Cal.) 1931 B. S., Univ. of Cal. *TT 4: P 4.* Refers to R. E. Davis, C. Derleth, Jr., C. G. Hyde.

812

- (10) SLOANE, BEN HOWARD, 228 Goddard St., Maryville, Tenn. (Age 25. Born Youngstown, Ohio.) 1930 B. S. in C. E., Ga. School Tech. *TT 4: P 4.*—June 1930 to date with Aluminum Co. of America, until Sept. 1930 as Technical Asst. in Reduction Dept., then Foreman in charge of Electrode Rodding Dept., Dec. 1930 to April 1931 Efficiency Man in furnace rooms on time study, and at present Gen. Foreman of furnace rooms of Hall Plant. *TT 0.5: SP 0.5.—TT 4.5: SP 0.5: P 4.* Refers to R. P. Black, F. C. Snow.

813

- (2) SMITH, ARTHUR ANDREW, 22 Belden St., Dorchester, Mass. (Age 23. Born Roxbury, Mass.) 1931 B. S., Mass. Inst. Tech. *TT 4: P 4.* Refers to T. R. Camp, C. M. Spofford.

814

- (13) SMITH, RUSSELL LINCOLN, 218 Wawona St., San Francisco, Cal. (Age 30. Born Oakland, Cal.) 1927 B. S. in C. E., Univ. of Cal. *TT 4: P 4.*—Feb. 1928 to July 1930 Asst. Supt., Kaiser Paving Co., Camaguey, Cuba, on highway construction. *TT 2.5: P 2.5: RC 1.*—Aug. 1930 to Feb. 1931 with Warren Bros. Co., Oriente, Cuba, on highway construction, contracting, arranging prices, terms and liquidations, chiefly drainage and shoulder work. *TT 0.6: P 0.6: RC 0.6.—TT 7.1: P 7.1: RC 1.6.* Refers to B. Jameyson, A. R. Olds.

815

- (16) SMOUSE, JOHN PAUL, St. Joseph, Mo. Graduating student awarded Iowa Section prize. (Age 24. Born Vinton, Iowa.) 1931 B. S. in C. E., Univ. of Iowa. *TT 4: P 4.*—Refers to J. J. Hinman, Jr., R. B. Kittredge, B. J. Lambert, F. A. Nagler, E. L. Waterman.

816

- (3) SNAVELY, HARRY GREIDER, 333 Elmwood Ave., Buffalo, N. Y. (Age 28. Born Rohrerstown, Pa.) student, Pennsylvania State Coll. (1924 to 1926) and New York Univ. (June 1927 to June 1928, evenings). *TT 1: P 1.*—Oct. 1926 to June 1927 Chairman, Pennsylvania R. R., acting as Instrumentman, Computer and Draftsman. *TT 0.4: P 0.4.*—June 1927 to June 1928 with Long Island R. R., as Instrumentman, Inspector on construction, Computer and Draftsman. *TT 0.5: SP 0.5.*—June 1928 to May 1930 Asst. Engr., Ulen & Co., New York City, in charge of party on topography and railroad-location surveys, on estimates, etc. *TT 1.9: P 1.9: RC 1.*—June 1930 to May 1931 Engr., W. H. Gahagan, Inc., Brooklyn, N. Y., directing construction, also Estimator preparing cost estimates and planning job and plant layouts. *TT 1: P 1: RC 1.—TT 4.8: SP 0.9: P 3.9: RC 2.* Refers to T. J. Carlile, N. H. Jones, M. R. Keefe, F. D. Nash, T. S. Shepperd.

817

- (8) SNOW, EDWIN JAMES, 764 South Kilbourn Ave., Chicago, Ill. (Age 24. Born Chicago, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.*—July 1929 to Oct. 1930 with Plant Engr.'s Office, Caterpillar Tractor Co., Peoria, Ill. *TT 1.2: P 1.2.—TT 5.2: P 5.2.* Refers to J. J. Doland, W. C. Huntington, T. C. Shedd.

818

- (2) SOEHRENS, JOHN EULER, 31 Dutton St., Wallingford, Conn. (Age 22. Born Auburn, R. I.) 1931 B. S., Sheffield Sci. School, Yale Univ. *TT 4: P 4.*—June 1926 to Sept. 1927 Rodman, Connecticut State Highway Dept., Portland, Conn. *TT 0.6: SP 0.6.—TT 4.6: SP 0.6: P 4.* Refers to C. T. Bishop, J. C. Tracy.

819

- (1) SOLONEWITZ, STANLEY, 430 Livonia Ave., Brooklyn, N. Y. (Age 25. Born in Poland.) 1928 B. S. in C. E., Copper Union (night school).—Nov. 1925 to date with Topographic Div., Bureau of Highways, Borough of Brooklyn, as Axeman, Rodman, Instrumentman and Transitman, after June 1926 in charge of field party.—*TT 5.3: SP 0.5: P 4.8.* Refers to I. D. Bedell, T. B. Brogan, F. E. Foss, W. R. Tenney, J. P. J. Williams.

820

- (2) SORENSEN, CARL HEINRICH, 144 Lenox Ave., Bridgeport, Conn. (Age 48. Born Copenhagen, Denmark.) Licensed Prof. Engr., State of Florida. 1905 B. S., Pol. Inst., Copenhagen, Denmark. *TT 4: P 4.*—1903 to 1913 Draftsman, Estimator, Constr. Foreman and Asst. Supt. for various firms. *TT 3: SP 3.*—June 1913 to May 1917 with Woollard & Cunningham, Gen. Contrs., Savannah, Ga., as Supt. of Bldg. Constr., residences and commercial buildings. *TT 2: SP 2.*—July 1917 to Feb. 1922 Structural Engr. and later in

charge of engineering, W. R. Phillips & Co., Industrial Engrs. and Contrs., Bridgeport, Conn., designing and constructing manufacturing plants. *TT 4.6: P 4.6: RC 3.5: D 2.5.*—April 1922 to July 1923 Engr. in charge of drafting and design, Patapsco Iron Works, Baltimore, Md., Aug. 1923 to March 1926 Asst. and later Chf. Engr., Decatur (Ala.) Iron & Steel Co., and April to Dec. 1926 Gen. Mgr., Highway Iron Product Co., Jacksonville, Fla., all structural steel fabricating plants, work included much original design. *TT 4.6: P 4.6: RC 4: D 3.3.*—March to June 1927 Designing Engr. with Fletcher Thompson, Inc., Engrs. and Archts., Bridgeport. *TT 0.3: P 0.3.*—July 1927 to date Engr. in charge of design with Leake & Nelson Co., Cons. and Contr. Welding Engrs., Bridgeport, on structural steel construction, especially electric welding and repairing and reinforcing bridges by arc welding. *TT 4: P 4: RC 4: D 4.*—*TT 22.5: SP 5: P 17.5: RC 11.5: D 9.8.* Refers to E. D. Bean, H. C. Elton, N. W. Green, J. G. Phelan, R. E. Spaulding, W. L. Unger, J. E. Wadsworth.

821

(12) **SORING, ARTHUR RANDOLPH**, Woodburn, Ore. (Age 22. Born Florence, S. Dak.) 1931 B. S. in Civ. Eng., Ore. State Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

822

(14) **SPERLING, ELMER JOHN**, 1102 Elm St., Rolla, Mo. (Age 25. Born Cape Girardeau, Mo.) 1931 B. S. in C. E., Mo. School of Mines. *TT 4: P 4.*—Summer 1928 Supplyman, Rouse Constr. Co., Cape Girardeau, Mo.—Summer 1930 Jun. Highway Engr., Slab Inspector and Proportionate Engr., Illinois State Highway Dept., Div. 9, Carbondale, Ill.—*TT 4: P 4.* Refers to C. E. Bardsley, H. C. Beckman, J. B. Butler, E. G. Harris, C. V. Mann.

823

(12) **STANGELAND, PAUL ANSELM**, 228 Thirty-eighth St., Astoria, Ore. (Age 22. Born Astoria, Ore.) 1931 B. S., Ore. State Agri. Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

824

(12) **STANLEY, HOWARD BURTON**, 2601 Forty-ninth St. Southeast, Portland, Ore. (Age 23. Born Pierre, S. Dak.) 1931 B. S. in C. E., Ore. State Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

825

(16) **STANTON, THOMAS EDWARD**, Potter Hotel, Perry, Iowa. (Age 28. Born Worcester, Mass.) 1927 B. S., Mass. Inst. Tech. *TT 4: P 4.*—June 1927 to June 1931 Field Engr., The Pitometer Co., New York City, on water-waste and trunk main surveys and distribution studies of water systems in United States and Canada. *TT 4: P 4: RC 1.5.*—*TT 8: P 8: RC 1.5.* Refers to H. E. Beckwith, C. R. Bird, E. D. Case, E. S. Cole, L. C. Hough, A. E. Skinner, E. K. Wilson.

826

(4) **STEINBACH, CHARLES WILLIAM**, 71 Chestnut St., Lewistown, Pa. (Age 21. Born Lewistown, Pa.) 1931 B. S., Mass. Inst. Tech. *TT 4: P 4.* Refers to J. B. Babcock, 3d, T. R. Camp, C. M. Spofford.

827

(10) **STEPHENS, JAMES HUSKEY**, Woodruff, S. C. (Age 23. Born Woodruff, S. C.) 1931 B. S. in C. E., Clemson Agri. & Mech. Coll. *TT 4: P 4.*—Oct. 1925 to Jan. 1926 Rodman and Chainman, Laurel Park Estates, Hendersonville, N. C.; Jan. to Sept. 1926 Transitman for Caesar's Head (S. C.) Mountains, Inc. *TT 0.5: SP 0.5.*—Sept. 1926 to Sept. 1927 Instrumentman, State Road Dept. of Florida, on location and construction. *TT 0.5: SP 0.5.*—*TT 5: SP 1: P 4.* Refers to E. L. Clarke, D. D. Curtis, H. E. Glenn.

828

(1) **STERN, CHARLES GEORGE**, 987 Park Ave., Union City, N. J. (Age 21. Born Union City, N. J.) 1931 B. S. in Civ. Eng., Rutgers Univ. *TT 4: P 4.* Refers to H. N. Lendall, W. Rudolfs.

829

(4) **STEVENS, CHARLES JAMES**, 5918 North Park Ave., Philadelphia, Pa. (Age 24. Born Philadelphia, Pa.) 1931 B. S. in C. E., Towne Sci. School, Univ. of Pa. *TT 4: P 4.*—Oct. 1925 to Sept. 1926 Apprentice and later Jun. Draftsman, on surveys and inspection, Dept. of City Transit, Philadelphia, Pa. *TT 0.4: SP 0.4.*—May 1928 to Feb. 1929 and summers 1929 and 1930 Rodman, Reading Co., Philadelphia, on bridge surveys, building erection, grade-crossing elimination, plotting cross-sections, profiles, calculations, etc. *TT 0.4: SP 0.4.*—*TT 4.8: SP 0.8: P 4.* Refers to W. H. Chorlton, C. Dillenbeck, S. Harris, C. H. Hitchcock, W. S. Pardoe.

830

(16) **STEVES, BERT FRANCIS**, 3714 East Ninth St., Kansas City, Mo. (Age 26. Born Topeka, Kans.) 1927 B. S. in C. E., Univ. of Kans. *TT 4: P 4.*—June 1927 to date

Designer with Black & Veatch, Kansas City, Mo., drafting, checking and finally in responsible charge of design and detailing. *TT 3.5: SP 0.5: P 2: RC 1.*—*TT 7.5: SP 0.5: P 7: RC 1.* Refers to E. B. Black, J. F. Brown, E. H. Dunmire, W. G. Fowler, H. A. Rice, N. T. Veatch, Jr.

831

(7) **STREETER, VICTOR LYLE**, Marcellus, Mich. (Age 21. Born Marcellus, Mich.) 1931 B. S. in C. E., Univ. of Mich. *TT 4: P 4.* Refers to R. A. Dodge, C. O. Wisler.

832

(4) **STROMBERG, EDGAR ABRAHAM**, 830 North Webster Ave., Scranton, Pa. (Age 22. Born Baltimore, Md.) 1931 B. S. in C. E., Sheffield Sci. School, Yale Univ. *TT 4: P 4.* Refers to C. T. Bishop, C. S. Farnham, R. H. Suttle, J. C. Tracy.

833

(16) **STUBBS, JAMES ARMSTRONG**, 2343 Ninth St., Boulder, Colo. (Age 23. Born LaJunta, Colo.) 1931 B. S. in Civ. Eng., Univ. of Colo. *TT 4: P 4.* Refers to F. R. Dungan, C. L. Eckel.

834

(6) **STUMPF, EDWARD HEER**, 1439 Cliffview Rd., N. S., Pittsburgh, Pa. (Age 33. Born Pittsburgh, Pa.) Registered Prof. Engr., Commonwealth of Pa.—Diploma in Mun. Eng. International Correspondence School.—June 1916 to Dec. 1918 Inspector, Pittsburgh & Lake Erie R. R. Co., on elimination of steel viaduct by constructing large retaining walls and back-filling for new tracks; checked contractor on plans, specification, etc., prepared estimates, checked materials, etc. *TT 1.3: SP 1.3.*—Dec. 1918 to May 1923 with Bureau of Eng., City of Pittsburgh, until Jan. 1921 with Div. of Streets, as Transitman and Asst. Engr. in charge of field party on surveys for data for contract plans for street improvements, lines, grades, etc. and supervising construction, then Eng. Draftsman, Div. of Design, preparing contract plans for street and sewer improvements, making necessary calculations, study plans, drawings, etc. *TT 3.3: SP 1: P 2.3: D 2.3.*—May 1923 to Jan. 1930 with Colonial Constr. Co., Pittsburgh, Pa., until July 1924 as Field Engr., in charge of construction of electrically driven strip steel mill at Leechburg, Pa., being responsible for superintendence, estimates, etc., then Gen. Mgr. and Chf. Engr., in charge of and supervising field construction, including about 84 miles of Pennsylvania State Highways, gathered data, prepared proposals, estimates and supervised all other major work. *TT 6.8: P 6.8: RC 6.8.*—Jan. 1930 to date Dist. Engr., Eastern Region, National Paving Brick Association, Pittsburgh, consulting with engineers and public officials regarding street and road design and construction, furnishing engineering data, reports, etc. *TT 1.5: P 1.5: RC 1.5.*—*TT 12.9: SP 2.3: P 10.6: RC 8.3: D 2.3.* Refers to H. G. Appel, S. Eckels, W. W. C. Perkins, T. M. Reed, J. S. Ritchey, N. S. Sprague, P. M. Tebbs.

835

(12) **STURMER, DALE EMANUEL**, 507 Marion Ave., Portland, Ore. Graduating student awarded Portland, Ore., Section prize. (Age 23. Born Warren, Ore.) 1931 B. S., Ore. State Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

836

(9) **SULLIVAN, JACOB BUTLER**, 1020 Temple Bar Bldg., Cincinnati, Ohio. (Age 39. Born Humeston, Iowa.) 1913 B. S. in C. E., Iowa State Coll. *TT 4: P 4.*—Aug. to Sept. 1913 Instrumentman with N. H. Tunecliff, Civ. Engr., Davenport, Iowa, on surveys. *TT 0.1: SP 0.1.*—Sept. 1913 to March 1914 Bridge Inspector and Draftsman with County Engr. at Davenport. *TT 0.2: SP 0.2.*—March 1914 to March 1917 City Engr. and in private practice at Huron, S. Dak., in charge of design and construction of paving, sewer systems, waterworks, surveys, etc. *TT 3: P 3: RC 3: D 3.*—March to July 1917 with Pickus Constr. Co., Sioux City, Iowa, on highway bridge contracting, in charge of construction. *TT 0.4: P 0.4: RC 0.4.*—Nov. 1917 to April 1918 Draftsman, U. S. Fuel Co., Danville, Ill., on mine mapping and structures. *TT 0.2: SP 0.2.*—April to Nov. 1918 Draftsman, LaSalle Eng. Co., Chicago, Ill., detailing fabricated steel ships. *TT 0.3: SP 0.3.*—Nov. 1918 to Jan. 1928 with Illinois Central Ry. Co., Chicago, until 1920 as Computer and Asst. Engr. on analysis of construction expenditures on bridges and buildings, then Designer and Squad Leader in charge of design for yard and terminal layouts on Chicago Terminal improvement. *TT 9.1: SP 0.1: P 9: RC 8.5: D 6.*—Jan. 1928 to date Asst. Engr. and Chf. Draftsman, with Cincinnati (Ohio) Union Terminal Co., until Dec. 1930 being Designer and Squad Leader in charge of design development for Union passenger terminal yards, freight yards, etc., and since Jan. 1931 Chf. Draftsman in charge of track and miscellaneous facility design and detail plans. *TT 3.5: P 3.5: RC 3.5: D 3.5.*—*TT 20.8: SP 0.9: P 19.9: RC 15.4: D 12.5.* Refers to J. M. Belknap, E. W. Clark, P. Jones, J. E. Root, G. P. Stowitts, H. M. Waite.

837

(5) **SYMNS, SAMUEL YOUNG, Jr.**, U. S. Coast and Geodetic Survey, Washington, D. C. (Age 26. Born Peterstown, W. Va.) 1931 C. E., Univ. of Akron. *TT 4: P 4.*—Sept. 1925

charge of engineering, W. R. Phillips & Co., Industrial Engrs. and Contrs., Bridgeport, Conn., designing and constructing manufacturing plants. *TT 4.6: P 4.6: RC 3.5: D 2.5.*—April 1922 to July 1923 Engr. in charge of drafting and design, Patapsco Iron Works, Baltimore, Md., Aug. 1923 to March 1926 Asst. and later Chf. Engr., Decatur (Ala.) Iron & Steel Co., and April to Dec. 1926 Gen. Mgr., Highway Iron Product Co., Jacksonville, Fla., all structural steel fabricating plants, work included much original design. *TT 4.6: P 4.6: RC 4: D 3.3.*—March to June 1927 Designing Engr. with Fletcher Thompson, Inc., Engrs. and Archts., Bridgeport. *TT 0.3: P 0.3.*—July 1927 to date Engr. in charge of design with Leake & Nelson Co., Cons. and Contr. Welding Engrs., Bridgeport, on structural steel construction, especially electric welding and repairing and reinforcing bridges by arc welding. *TT 4: P 4: RC 4: D 4.*—*TT 22.5: SP 5: P 17.5: RC 11.5: D 9.8.* Refers to E. D. Bean, H. C. Elton, N. W. Green, J. G. Phelan, R. E. Spaulding, W. L. Unger, J. E. Wadsworth.

821

(12) **SORING, ARTHUR RANDOLPH**, Woodburn, Ore. (Age 22. Born Florence, S. Dak.) 1931 B. S. in Civ. Eng., Ore. State Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

822

(14) **SPERLING, ELMER JOHN**, 1102 Elm St., Rolla, Mo. (Age 25. Born Cape Girardeau, Mo.) 1931 B. S. in C. E., Mo. School of Mines. *TT 4: P 4.*—Summer 1928 Supplyman, Rouse Constr. Co., Cape Girardeau, Mo.—Summer 1930 Jun. Highway Engr., Slab Inspector and Proportionate Engr., Illinois State Highway Dept., Div. 9, Carbondale, Ill.—*TT 4: P 4.* Refers to C. E. Bardsley, H. C. Beckman, J. B. Butler, E. G. Harris, C. V. Mann.

823

(12) **STANGELAND, PAUL ANSELM**, 228 Thirty-eighth St., Astoria, Ore. (Age 22. Born Astoria, Ore.) 1931 B. S., Ore. State Agri. Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

824

(12) **STANLEY, HOWARD BURTON**, 2601 Forty-ninth St. Southeast, Portland, Ore. (Age 23. Born Pierre, S. Dak.) 1931 B. S. in C. E., Ore. State Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

825

(16) **STANTON, THOMAS EDWARD**, Potter Hotel, Perry, Iowa. (Age 28. Born Worcester, Mass.) 1927 B. S., Mass. Inst. Tech. *TT 4: P 4.*—June 1927 to June 1931 Field Engr., The Pitometer Co., New York City, on water-waste and trunk main surveys and distribution studies of water systems in United States and Canada. *TT 4: P 4: RC 1.5.*—*TT 8: P 8: RC 1.5.* Refers to H. E. Beckwith, C. R. Bird, E. D. Case, E. S. Cole, L. C. Hough, A. E. Skinner, E. K. Willson.

826

(4) **STEINBACH, CHARLES WILLIAM**, 71 Chestnut St., Lewistown, Pa. (Age 21. Born Lewistown, Pa.) 1931 B. S., Mass. Inst. Tech. *TT 4: P 4.* Refers to J. B. Babcock, 3d, T. R. Camp, C. M. Spofford.

827

(10) **STEPHENS, JAMES HUSKEY**, Woodruff, S. C. (Age 23. Born Woodruff, S. C.) 1931 B. S. in C. E., Clemson Agri. & Mech. Coll. *TT 4: P 4.*—Oct. 1925 to Jan. 1926 Rodman and Chainman, Laurel Park Estates, Hendersonville, N. C.; Jan. to Sept. 1926 Transitman for Caesar's Head (S. C.) Mountains, Inc. *TT 0.5: SP 0.5.*—Sept. 1926 to Sept. 1927 Instrumentman, State Road Dept. of Florida, on location and construction. *TT 0.5: SP 0.5.*—*TT 5: SP 1: P 4.* Refers to E. L. Clarke, D. D. Curtis, H. E. Glenn.

828

(1) **STERN, CHARLES GEORGE**, 987 Park Ave., Union City, N. J. (Age 21. Born Union City, N. J.) 1931 B. S. in Civ. Eng., Rutgers Univ. *TT 4: P 4.* Refers to H. N. Lendall, W. Rudolfs.

829

(4) **STEVENS, CHARLES JAMES**, 5918 North Park Ave., Philadelphia, Pa. (Age 24. Born Philadelphia, Pa.) 1931 B. S. in C. E., Towne Sci. School, Univ. of Pa. *TT 4: P 4.*—Oct. 1925 to Sept. 1926 Apprentice and later Jun. Draftsman, on surveys and inspection, Dept. of City Transit, Philadelphia, Pa. *TT 0.4: SP 0.4.*—May 1928 to Feb. 1929 and summers 1929 and 1930 Rodman, Reading Co., Philadelphia, on bridge surveys, building erection, grade-crossing elimination, plotting cross-sections, profiles, calculations, etc. *TT 0.4: SP 0.4.*—*TT 4.8: SP 0.8: P 4.* Refers to W. H. Chorlton, C. Dillenbeck, S. Harris, C. H. Hitchcock, W. S. Pardoe.

830

(16) **STEVES, BERT FRANCIS**, 3714 East Ninth St., Kansas City, Mo. (Age 26. Born Topeka, Kans.) 1927 B. S. in C. E., Univ. of Kans. *TT 4: P 4.*—June 1927 to date

Designer with Black & Veatch, Kansas City, Mo., drafting, checking and finally in responsible charge of design and detailing. *TT 3.5: SP 0.5: P 2: RC 1.—TT 7.5: SP 0.5: P 7: RC 1.* Refers to E. B. Black, J. F. Brown, E. H. Dunmire, W. G. Fowler, H. A. Rice, N. T. Veatch, Jr.

831

(7) **STREETER, VICTOR LYLE**, Marcellus, Mich. (Age 21. Born Marcellus, Mich.) 1931 B. S. in C. E., Univ. of Mich. *TT 4: P 4.* Refers to R. A. Dodge, C. O. Wisler.

832

(4) **STROMBERG, EDGAR ABRAHAM**, 830 North Webster Ave., Scranton, Pa. (Age 22. Born Baltimore, Md.) 1931 B. S. in C. E., Sheffield Sci. School, Yale Univ. *TT 4: P 4.* Refers to C. T. Bishop, C. S. Farnham, R. H. Suttie, J. C. Tracy.

833

(16) **STUBBS, JAMES ARMSTRONG**, 2343 Ninth St., Boulder, Colo. (Age 23. Born LaJunta, Colo.) 1931 B. S. in Civ. Eng., Univ. of Colo. *TT 4: P 4.* Refers to F. R. Dungan, C. L. Eckel.

834

(6) **STUMPF, EDWARD HEER**, 1439 Cliffview Rd., N. S., Pittsburgh, Pa. (Age 33. Born Pittsburgh, Pa.) Registered Prof. Engr., Commonwealth of Pa.—Diploma in Mun. Eng. International Correspondence School.—June 1916 to Dec. 1918 Inspector, Pittsburgh & Lake Erie R. R. Co., on elimination of steel viaduct by constructing large retaining walls and back-filling for new tracks; checked contractor on plans, specification, etc., prepared estimates, checked materials, etc. *TT 1.3: SP 1.3.—Dec. 1918 to May 1923 with Bureau of Eng., City of Pittsburgh, until Jan. 1921 with Div. of Streets, as Transitman and Asst. Engr. in charge of field party on surveys for data for contract plans for street improvements, lines, grades, etc. and supervising construction, then Eng. Draftsman, Div. of Design, preparing contract plans for street and sewer improvements, making necessary calculations, study plans, drawings, etc. TT 3.3: SP 1: P 2.3: D 2.3.—May 1923 to Jan. 1930 with Colonial Constr. Co., Pittsburgh, Pa., until July 1924 as Field Engr., in charge of construction of electrically driven strip steel mill at Leechburg, Pa., being responsible for superintendence, estimates, etc., then Gen. Mgr. and Chf. Engr., in charge of and supervising field construction, including about 84 miles of Pennsylvania State Highways, gathered data, prepared proposals, estimates and supervised all other major work. TT 6.8: P 6.8: RC 6.8.—Jan. 1930 to date Dist. Engr., Eastern Region, National Paving Brick Association, Pittsburgh, consulting with engineers and public officials regarding street and road design and construction, furnishing engineering data, reports, etc. TT 1.5: P 1.5: RC 1.5.—TT 12.9: SP 2.3: P 10.6: RC 8.3: D 2.3.* Refers to H. G. Appel, S. Eckels, W. W. C. Perkins, T. M. Reed, J. S. Ritchey, N. S. Sprague, P. M. Tebbis.

835

(12) **STURMER, DALE EMANUEL**, 507 Marion Ave., Portland, Ore. Graduating student awarded Portland, Ore., Section prize. (Age 23. Born Warren, Ore.) 1931 B. S., Ore. State Coll. *TT 4: P 4.* Refers to J. R. Griffith, H. S. Rogers.

836

(9) **SULLIVAN, JACOB BUTLER**, 1020 Temple Bar Bldg., Cincinnati, Ohio. (Age 39. Born Humeston, Iowa.) 1913 B. S. in C. E., Iowa State Coll. *TT 4: P 4.—Aug. to Sept. 1913 Instrumentman with N. H. Tuneciff, Civ. Engr., Davenport, Iowa, on surveys. TT 0.1: SP 0.1.—Sept. 1913 to March 1914 Bridge Inspector and Draftsman with County Engr. at Davenport. TT 0.2: SP 0.2.—March 1914 to March 1917 City Engr. and in private practice at Huron, S. Dak., in charge of design and construction of paving, sewer systems, waterworks, surveys, etc. TT 3: P 3: RC 3: D 3.—March to July 1917 with Pickus Constr. Co., Sioux City, Iowa, on highway bridge contracting, in charge of construction. TT 0.4: P 0.4: RC 0.4.—Nov. 1917 to April 1918 Draftsman, U. S. Fuel Co., Danville, Ill., on mine mapping and structures. TT 0.2: SP 0.2.—April to Nov. 1918 Draftsman, LaSalle Eng. Co., Chicago, Ill., detailing fabricated steel ships. TT 0.3: SP 0.3.—Nov. 1918 to Jan. 1928 with Illinois Central Ry. Co., Chicago, until 1920 as Computer and Asst. Engr. on analysis of construction expenditures on bridges and buildings, then Designer and Squad Leader in charge of design for yard and terminal layouts on Chicago Terminal improvement. TT 9.1: SP 0.1: P 9: RC 8.5: D 6.—Jan. 1928 to date Asst. Engr. and Chf. Draftsman, with Cincinnati (Ohio) Union Terminal Co., until Dec. 1930 being Designer and Squad Leader in charge of design development for Union passenger terminal yards, freight yards, etc., and since Jan. 1931 Chf. Draftsman in charge of track and miscellaneous facility design and detail plans. TT 3.5: P 3.5: RC 3.5: D 3.5.—TT 20.8: SP 0.9: P 19.9: RC 15.4: D 12.5.* Refers to J. M. Belknap, E. W. Clark, P. Jones, J. E. Root, G. P. Stowitts, H. M. Waite.

837

(5) **SYMNS, SAMUEL YOUNG, Jr.**, U. S. Coast and Geodetic Survey, Washington, D. C. (Age 26. Born Peterstown, W. Va.) 1931 C. E., Univ. of Akron. *TT 4: P 4.—Sept. 1925*

to Nov. 1929 (part of time) with Eng. Dept., Firestone Tire & Rubber Co., Akron, Ohio, on street improvement, sewer construction, topographic map work, inspection of building construction, estimating and maintenance.—Nov. 1929 to Nov. 1930 with Firestone Plantations Co., Monrovia, Liberia, West Africa, on triangulations, computations and topographic map work. *TT 1: P 1.*—May 1931 to date Recorder, First Order Level Party, U. S. Coast and Geodetic Survey. *TT 0.2: SP 0.2.—TT 5.2: SP 0.2: P 5.* Refers to F. E. Ayer, J. W. Bulger, M. L. Davis, R. C. Durst, C. F. Maynard.

838

(1) SYVERSEN, GUSTAV RANDOLPH, 33 Valencia Ave., Randall Manor, N. Y. (Age 21. Born Brooklyn, N. Y.) 1931 C. E., Pol. Inst. of Brooklyn. *TT 4: P 4.* Refers to H. P. Hammond, E. J. Squire.

839

(9) TANGEMAN, RICHARD MICHAL, 611 West Auglaize St., Wapakoneta, Ohio. (Age 23. Born New Bremen, Ohio.) 1931 B. C. E., Ohio State Univ. *TT 4: P 4.*—Summer 1926 Rodman, The Koppers Constr. Co., Pittsburgh, Pa., on coke-plant construction.—June to Dec. 1927 Rodman and Instrumentman, The Northern States Power Co., Minneapolis, Minn., on construction of hydro-power plant at Chippewa Falls, Wis. *TT 0.2: SP 0.2.*—Summer 1929 Instrumentman, The Hudson Bay Mining & Smelting Co., Flin Flon, Manitoba.—Summer 1930 Instrumentman, Ohio State Dept. of Highways, on survey and plans.—*TT 4.2: SP 0.2: P 4.* Refers to C. T. Morris, J. R. Shank, C. E. Sherman.

840

(13) TAYLOR, GEORGE HOLMES, 213 West Oak St., Lodi, Cal. (Age 30. Born Villisca, Iowa.) 1924 B. S. C. E., Univ. of Nebr. *TT 4: P 4.*—April to Sept. 1924 Asst. Engr. with R. E. Tilden, Cons. Engr., Berkeley, Cal., in field charge on raising old rock fill dam 16 ft., (8 ft. rock fill and 8 ft. gravity wall) and designing and supervising building of spillway. *TT 0.5: P 0.5.*—Oct. to Dec. 1924 Inspector, Nevada State Highway Dept., on concrete and gravel highways. *TT 0.1: SP 0.1.*—Jan. 1925 to Aug. 1926 Instrumentman, Chicago, Burlington & Quincy R. R. *TT 0.8: SP 0.8.*—Sept. 1926 to date Jun. to Asst. Hydr. Engr., U. S. Geological Survey, Water Resources Branch, Ground Water Div., on investigations of surface- and ground-water supplies. *TT 4.7: P 4.7: RC 1.8.—TT 10.1: SP 0.9: P 9.2: RC 1.8.* Refers to P. Bailey, C. E. Grunsky, Jr., L. S. Hall, C. A. McClelland, C. E. Mickey, N. P. Nelson, H. C. Troxell.

841

(1) TERRY, FRANCIS HALLOCK, 38 Park Ave., Bay Shore, N. Y. (Age 23. Born Bay Shore, N. Y.) 1931 C. E., Rens. Pol. Inst. *TT 4: P 4.*—Summer 1930 and July 1931 to date Asst. Engr. with Suffolk County, N. Y., drafting, surveying and constructing highways.—*TT 4: P 4.* Refers to E. R. Cary, L. W. Clark, T. R. Lawson, H. O. Sharp.

842

(11) THOMAS, DAN HORACE, 1428 North Broadway, Santa Ana, Cal. (Age 41. Born Knowlesville, N. Y.) Registered Civ. Engr., State of California. 1908 to 1911 student in Geology and Mining, Stanford Univ. *TT 1.5: P 1.5.*—1911 to 1912 Asst. Assayer and Surveyor, Gold Hunter Min. Co., Mullen, Idaho, on surveys and maps of underground work, claim locations and assays. *TT 0.5: SP 0.5.*—1912 to 1913 Transitman, Gen. Petroleum Co., on location, grades and inspection for pipe line and pumping station, Mountain Div., Taft to San Pedro. *TT 0.7: SP 0.7.*—1913 to 1915 Constr. Supt. and Bldg. Inspector, Valley Pipe Line Co. (Shell Co. of California), on pump stations, cottages and pipe line location through Mountain Div. *TT 0.8: SP 0.8.*—1915 to 1917 Gauger and later Stillman, Shell Oil Co. of California, Martinez, Cal.—1917 to 1919 Leaderman Ship-Fitter, Pacific Coast Shipbuilding Co.—1919 to 1920 Constr. Foreman, Associated Oil Co., Avon, Cal.—1920 to 1922 Chf. of Party, U. S. Reclamation Service, Rio Grande Project, irrigation and drainage-ditch location. *TT 1: SP 1.*—1922 to 1926 Chf. Draftsman, County Surveyor's Office, Orange County, Cal.; designed and supervised San Clemente water system, highways, subdivisions and bridges. *TT 3.5: SP 1: P 2.5: RC 2.5: D 2.5.*—1926 to date Supt., National Cement Pipe Co.; designed and constructed irrigation and drainage systems for Whiting, Golden West and Fuller Ranches and Talbert Drainage Dist.; Cons. Engr. S. E. and S. W. Sewer Dist., Santa Ana; Supt. for manufacturing and installation of pipe lines (about 250 000 ft. annually). *TT 4.8: P 4.8: RC 4.8: D 4.8.—TT 12.8: SP 4: P 8.8: RC 7.3: D 7.3.* Refers to A. A. Beard, L. L. Carter, W. W. Hoy, W. L. Jencks, N. H. Neff, R. L. Patterson, N. D. Whitman.

843

(2) THOMAS, MENDALL PATTERSON, 65 Penfield St., Roslindale, Mass. (Age 22. Born Boston, Mass.) 1930 B. S., and 1931 M. S., Mass. Inst. Tech. *TT 4: P 4.*—Summers 1926-1929 Rodman for E. Worthington, Surveyor and Engr., Dedham, Mass.—Summers 1929 and 1930 Instructor in Surveying, Massachusetts Inst. of Technology Camp.—*TT 4: P 4.* Refers to T. R. Camp, C. M. Spofford.

844

(4) THOMAS, PAUL GIBSON, 1991 North Sixty-third St., Philadelphia, Pa. (Age 21. Born Philadelphia, Pa.) 1931 B. S. in C. E., Towne Sci. School, Univ. of Pa. TT 4: P 4. Refers to H. C. Berry, F. P. Witmer.

845

(1) THOMAS, PAUL IRVING, 19 Mertz Ave., Hillside, N. J. (Age 25. Born Bretton Woods, N. H.) 1931 B. S. in C. E., Univ. of New Mexico. TT 4: P 4. Refers to J. L. Burkholder, A. Diefendorf, J. H. Dorroh.

846

(3) THOMPSON, GEORGE DeLAMATER, Jr., R. D. No. 1, Box 101, Rensselaer, N. Y. (Age 23. Born Rensselaer, N. Y.) 1931 C. E., Rens. Pol. Inst. TT 4: P 4. Refers to E. R. Cary, L. W. Clark, H. B. Compton, T. R. Lawson, P. C. Ricketts, W. W. Rousseau, H. O. Sharp.

847

(1) TOOMEY, THOMAS JEREMIAH, Jr., 2477 Ocean Ave., Brooklyn, N. Y. (Age 26. Born New York City.) 1926 B. S. in Civ. Eng., Manhattan Coll. 1929 L. L. B., Fordham Law School. TT 4: P 4.—June 1926 to Oct. 1927 Transitman, Dept. of Water Supply, Gas & Electricity, Bureau of Water Supply, Designing Div., on field work for collecting data for design, estimating of contracts, survey and map drawing of department's real estate, etc. TT 1.3: P 1.3.—Dec. 1927 (5 days) Topographical Draftsman, Dept. of Law, Corporation Counsel, Bureau of Street Openings, investigating and calculating property for estimating assessments, etc.—Jan. 1928 to date Topographical Draftsman, Borough President's Office, Brooklyn, Bureau of Highways, Survey and Design, estimating and drawing contracts for repaving, regulating and grading streets. TT 3.5: P 3.5.—TT 8.8: P 8.8. Refers to I. D. Bedell, T. B. Brogan, J. C. O'Dea, W. R. Tenney.

848

(12) TOUSEY, BERTLAND JAY GRANDISON, 2821 Sixty-second St. S. E., Portland, Ore. (Age 23. Born Sumpter, Ore.) 1931 B. S., Ore. State Coll. TT 4: P 4. Refers to J. R. Griffith, H. S. Rogers.

849

(8) TRUE, JAMES NORVEL, 812 West Main St., Urbana, Ill. (Age 29. Born St. Louis, Mo.) 1931 B. S., Univ. of Ill. TT 4: P 4.—March-Dec. 1923 Rodman, Jefferson Southwestern R. R. Co. TT 0.4: SP 0.4.—Jan. 1924-March 1926 Rodman and Instrumentman, Illinois Coal Corporation, Nason, Ill., on mine construction, surveying and shaft sinking. TT 2.1: SP 1.1: P 1.—April 1926-June 1927 Instrumentman, Union Colliery Co., Dowell, Ill., being Chf. of Party on mine surveying. TT 1.2: P 1.2.—Summers 1929 and 1930 successively Supt. with C. F. Harris, St. Louis, Mo., in charge of building residence (\$20 000) and Jun. Engr., Illinois State Highway Dept., Elgin, Ill., acting as Instrumentman.—TT 7.7: SP 1.5: P 6.2. Refers to J. J. Doland, M. L. Enger, W. C. Huntington, M. S. Ketchum, G. W. Pickels, T. C. Shedd, J. Vawter.

850

(13) TUCKER, JOHN THOMAS, 2547 Channing Way, Berkeley, Cal. (Age 26. Born Tampa, Kans.) 1931 B. S. in E., Univ. of Cal. TT 4: P 4.—Dec. 1923 to June 1931 (while student) Draftsman with Libby, McNeil & Libby, on mill building construction, designing cannery machinery, etc.; designed housing facilities for workmen, machinery, boiler settings and foundations for plants at Gridley, Selma and Sunnyvale, cannery extensions at Sacramento and Sunnyvale, steel building for boiler room, Selma plant, was Inspector on additions and extensions, on machinery installation, etc. TT 4: P 4. Refers to R. E. Davis, C. Derleth, Jr., F. S. Foote, C. G. Hyde, T. H. Means.

851

(15) TULL, ROBERT ALEXANDER, Box 95, Paducah, Tex. (Age 23. Born Mart, Tex.) 1926-1927 student, Univ. of Texas. TT 1: P 1.—Nov. 1927 to date with Texas State Highway Dept., until April 1929 as Rodman, Chainman, Inspector on small structures, and office Asst. on location, plans, grading and drainage structures, and May 1929 to Oct. 1930 Office Engr. and Instrumentman in charge on 30 miles of concrete pavement, all in Hale County; Nov. 1930 to Feb. 1931 Instrumentman in charge of field work on construction of 5 miles of concrete pavement and since Feb. 1931 Instrumentman, Inspector and Office Engr. on 12 miles of crusher run broken stone base and bituminous surface treatment highway construction, in Cottle County. TT 3: SP 0.7: P 2.3: RC 0.2.—TT 4: SP 0.7: P 3.3: RC 0.2. Refers to H. R. Anderson, A. G. Classen, W. A. French, C. S. Henning, Jr., W. Holbrook, G. R. Johnston, J. G. Rollins.

852

(1) TURNER, CLINTON CHATFIELD, 939 Boulevard, Westfield, N. J. (Age 30. Born Utica, N. Y.) 1923 C. E., Coll. of Applied Sci., Syracuse Univ. TT 4: P 4.—June 1923 to May

1931 with Concrete Steel Co., New York City, 3 years as Draftsman and 5 years Sales Engr., estimating and selling. *TT 4: SP 4.—TT 8: SP 4: P 4.* Refers to E. F. Berry, L. Mitchell, S. D. Sarason.

853

(2) **TURNER, HENRI BATCHELDER**, 16 Forest Ave., Everett, Mass. (Age 23. Born Everett, Mass.) 1931 B. S., Mass. Inst. Tech. *TT 4: P 4.* Refers to J. B. Babcock, 3d, C. M. Spofford.

854

(4) **TWIGGAR, EDWARD VERNON**, 1234 Vance Ave., Coraopolis, Pa. (Age 23. Born Shamokin, Pa.) 1931 B. S. in C. E., Lehigh Univ. *TT 4: P 4.*—Summers 1929 and 1930 Chainman, Stone & Webster Eng. Corporation on layout of railroad yards for coal breakers at Locust Summit and St. Nicholas, Pa.—June 1931 to date Engr., Dravo Contr. Co., Coraopolis, Pa., in drafting room.—*TT 4: P 4.* Refers to S. A. Becker, H. G. Payrow, C. H. Sutherland, W. L. Wilson.

855

(8) **UITTI, WILLIAM LEOPOLD**, 5500 North Neenah Ave., Chicago, Ill. (Age 23. Born Kearsarge, Mich.) 1931 B. S. in Civ. Eng., Mich. Coll. of Min. and Tech. *TT 4: P 4.*—March 1927 to Feb. 1928 Foreman on reinforcing steel, Forschner Constr. Co., on sanitary district work, Chicago, Ill. *TT 0.5: SP 0.5.*—3 months Levelman and Transitman, Ralph Sollitt & Sons, on Des Plaines High School, Chicago, Chf. of Party on surveys, farm and lake lot subdivisions.—Summer 1929 Technician and Mfg. Analyst, Western Elec. Co., Chicago.—At present 2d Lieut., Reserve Corps of Engrs., U. S. Army.—*TT 4.5: SP 0.5: P 4.* Refers to H. B. Pettit, W. C. Polkinghorne, G. I. Uitti.

856

(9) **VEECH, JOHN ALEXANDER**, 926 Cherokee Rd., Louisville, Ky. Graduating student awarded Virginia Section prize. (Age 23. Born St. Mathews, Ky.) 1931 B. S. in C. E., Washington and Lee Univ. *TT 4: P 4.* Refers to J. A. Anderson, W. T. Lyle, G. R. Smiley.

857

(1) **VICENTE, ELISIO FERREIRA**, 1900 Grand Concourse, New York City. (Age 27. Born Carrico, Pombal, Portugal.) 1931 B. S. in C. E., N. Y. Univ. (Evening School.) *TT 4: P 4.*—Dec. 1924 to June 1925 Draftsman, Hay Foundry & Iron Works, Newark, N. J., tracing structural shop drawings.—June 1925 to April 1931 Structural Draftsman, McClintic Marshall Co., New York City, making and checking structural shop drawings for office and mill buildings, bridges and subways, and (Jan. to Nov. 1928) designing erection equipment and making stress sheets for bridge erection. *TT 4: P 4.* Refers to J. J. Ashton, E. G. Hooper, M. C. Knabe, 3d, C. T. Schwarze.

858

(9) **VOLDRICH, CONSTANTINE BRZBOHATY**, 3119 West Twenty-Second St., Chicago, Ill. Graduating student awarded Illinois Section prize. (Age 22. Born Brno, Czechoslovakia.) 1931 B. S. C. E., Purdue Univ. *TT 4: P 4.*—May 1926 to June 1927 Jun. Chemist, Armour & Co., Chicago, Ill., analyzing water, fats and oils. *TT 0.5: SP 0.5.*—Summer 1929 Instrumentman and Chainman, George Jerome & Sons, Detroit, Mich., on surveys, location and relocation of structures.—Summer 1930 Laborer, Wm. H. Maybury Sanatorium, Northville, Mich.—*TT 4.5: SP 0.5: P 4.* Refers to W. K. Hatt, S. C. Hollister, W. A. Knapp, G. E. Lommel, G. P. Springer, R. B. Wiley.

859

(16) **WALKER, OTIS HAROLD**, 217 East Walnut St., Columbus, Kans. Graduating student awarded Kansas State Section prize. (Age 22. Born Junction City, Kans.) 1931 B. S. in C. E., Kans. State Coll. of Agri. and Applied Sci. *TT 4: P 4.*—May 1931 to date Slab Inspector, Kansas State Highway Comm. *TT 0.1: SP 0.1.—TT 4.1: SP 0.1: P 4.* Refers to L. E. Conrad, F. F. Frazier, M. W. Furr, L. V. White.

860

(1) **WALLACE, GORDON**, 650 West One Hundred Seventy-seventh St., New York City. (Age 25. Born Accrington, Lancashire, England.) 1931 B. S. in Civ. Eng., Cooper Union Night School.—Oct. 1921 to July 1923 Apprentice Machinery Erector, Howard & Bullough, Ltd., Accrington, England, on textile machinery. *TT 0.8: SP 0.8.*—March 1924 to June 1925 Machinery Erector, Wolverine Motor Works, Bridgeport, Conn., on erection, repair and operation of Diesel and gas engines. *TT 0.6: SP 0.6.*—June 1925 to May 1926 Jun. Draftsman, De La Vergne Machine Co., New York City, tracing and detail plans for Diesel engines. *TT 0.5: SP 0.5.*—May 1926 to date with Terminal Engr.'s office, New York Central R. R. Co., New York City, until Oct. 1929 as Draftsman, drafting, checking, computing, steel, concrete and track work, etc., and in charge of mechanical and architectural work on New York Central Bldg., and since Oct. 1929 Eng. Draftsman, checking steel and data on Waldorf

Astoria and Grand Central Terminal improvement, investigation and studies for trackwork, standards and layouts. *TT 3.8: SP 1: P 2.8: RC 1: D 1.*—*TT 5.7: SP 2.9: P 2.8: RC 1: D 1.* Refers to F. E. Foss, M. Ketchum, J. P. J. Williams.

861

(8) **WALLER, ROBERT ORVILLE**, 701 Ten Broeck St., Paris, Ill. (Age 25. Born Horton, Kans.) 1931 B. S., Univ. of Ill. *TT 4: P 4.* Refers to H. E. Babbitt, R. S. Crossman, J. J. Doland, H. H. Jordan, W. A. Oliver, N. T. Veatch, Jr.

862

(14) **WARE, WALTER JUSTUS**, 1000 Pine St., Rolla, Mo. (Age 26. Born Coffeen, Ill.) 1931 B. S. in C. E., Mo. School of Mines and Metallurgy. *TT 4: P 4.*—Jan. to May 1926 Private, and Jan. to April 1928 Sergeant, Co. C, 11th Engrs., U. S. Army, being Computer, Chf. of Party and Topographical Sketcher on military survey of Panama, Panama. *TT 0.3: SP 0.3.*—*TT 4.3: SP 0.3: P 4.* Refers to C. E. Bardsley, J. B. Butler, E. W. Carlton, E. G. Harris.

863

(5) **WATSTEIN, DAVID**, 1374 Kenyon St. N. W., Washington, D. C. (Age 24. Born Brest-Litovsk, Russia.) 1930 B. S. in Civ. Eng., Univ. of Cal. *TT 4: P 4.*—June 1930 to date Jun. Structural Engr., Cement Sec., U. S. Bureau of Standards, physical tests of cement and concrete. *TT 1: P 1.*—*TT 5: P 5.* Refers to R. E. Davis, C. Derleth, Jr., C. G. Hyde, B. Jameyson, G. E. Troxell.

864

(9) **WATTERS, HENRY BERTRAM**, 8 East Long Street, Columbus, Ohio. (Age 51. Born Atalissa, Iowa.) 3½ years student in Civ. Eng. (at intervals), Univ. of Iowa. —May to Sept. 1901 Rodman, Chicago, Milwaukee & St. Paul Ry. *TT 0.2: SP 0.2.*—Jan. 1902 to May 1903 Instrumentman, successively with Wisconsin & Arkansas Lumber Co. and Mexican Central Ry. Co. *TT 0.7: SP 0.7.*—Summers 1903 and 1904 U. S. Inspector, Mississippi River Improvement, U. S. Govt. *TT 0.3: SP 0.3.*—Jan. to April 1905 Instrumentman, Southern Pacific Ry. Co. *TT 0.1: SP 0.1.*—April 1905 to Aug. 1906 Constr. Supt., Isthmian Canal Comm., in charge of construction of about one-half of sewers and water mains in City of Panama, also of pavements and later of highways in Canal Zone in vicinity of Panama. *TT 1.3: P 1.3: RC 1.3.*—Aug. 1906 to Sept. 1907 Chf. Engr., Chimbote to Recuay Ry. in Peru, on maintenance (58 miles) location and estimating (about 300 miles) and construction (about 30 miles). *TT 1.1: P 1.1: RC 1.1.*—Sept. 1907 to Jan. 1909 Div. Engr. and Constr. Engr., Peruvian Central Ry., Peru on about 125 miles of railway location and construction, Arroga to Huancays *TT 1.3: P 1.3: RC 1.3.*—1909 to 1910 Engr., C. M. & St. P. Ry., on maintenance. *TT 0.5: P 0.5: RC 0.5.*—1910 to 1911 Engr., Argentine Quebeacho Co., on construction of railway (20 miles), completion of tannic acid plant, etc. *TT 0.5: P 0.5: RC 0.5.*—1911 to 1915 Engr. with C. A. Wilson, Railway Expert of Cincinnati, Ohio, on railroad studies and locations; assisted on or had charge of field work, design and estimating for rapid transit lines, railroads, grade reduction, etc., in various places. *TT 4: P 4: RC 4.*—1915 to 1918 Res. Engr. and Div. Engr., Chesapeake & Ohio Ry. Co., location, construction and maintenance, Limeville, Ky. to Waverly, Ohio, also controlled operation for one year. *TT 3: P 3: RC 3.*—1919 to 1921 Chf. Engr., Detroit, Toledo & Ironton Ry., in full charge of maintenance, construction, location, valuation, etc. *TT 2: P 2: RC 2.*—1921 to date Pres., Eng. & Contr. Co., last four years under name of The H. B. Watters Co., on railway work, construction of sewers, water-works, pavements, buildings, bridges, highways, excavation, drainage, etc. (about \$120 000 annually), etc. *TT 10: P 10.*—*TT 25: SP 1.2: P 23.8: RC 13.8.* Refers to E. G. Bradbury, F. W. Jennings, V. G. Watters, H. C. Willcox, C. A. Wilson.

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(15) **WEAVER, HILLAND CRITTENDON**, Rule, Tex. (Age 25. Born Purvis, Tex.) 1931 B. S. in C. E., Univ. of Tex. *TT 4: P 4.*—Jan. to Sept. 1927 Chalmers, and Sept. 1927 to Sept. 1928 and summer 1929 Rodman, Gulf, Colorado & Santa Fe R. R. *TT 0.8: SP 0.8.*—*TT 4.8: SP 0.8: P 4.* Refers to E. C. H. Bantel, J. A. Focht, T. U. Taylor.

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(1) **WEINKAUFF, HENRY CHRISTIAN CORNELIUS**, 7740 Seventy-ninth Place, Glendale, N. Y. (Age 22. Born Queens, N. Y.) 1931 C. E., Pol. Inst. of Brooklyn. *TT 4: P 4.* Refers to H. R. Codwise, H. P. Hammond, L. F. Rader, E. J. Squire.

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(16) **WEINSTEIN, HENRY**, P. O. Box 223, Rock Springs, Wyo. (Age 23. Born Omaha, Nebr.) 1931 B. S., Univ. of Wyo. *TT 4: P 4.*—Summers 1928–1930 and June 1931 to date with Wyoming Highway Comm., as Rodman, Draftsman, Instrumentman and Inspector, on surfacing, location, bridge inspection, etc., at present being Draftsman and Computer. —*TT 4: P 4.* Refers to R. D. Goodrich, H. T. Person.

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(2) **WEINSTEIN, HOWARD**, 23 Earle St., Hartford, Conn. (Age 23. Born Hartford, Conn.) A. B., Dartmouth Coll. 1931 C. E., Thayer School Civ. Eng. *TT 4: P 4.* Refers to R. Fletcher, R. R. Marsden, C. M. Saville.

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(4) **WEISS, FREDERICK MARTIN**, 205 Foulke Hall, Princeton, N. J. (Age 23. Born Hackensack, N. J.) 1931 B. S. in Eng., Princeton Univ. *TT 4: P 4.*—Summer 1929 Chainman, Pennsylvania R. R.—*TT 4: P 4.* Refers to F. H. Constant, W. G. Grove.

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(6) **WEITZEL, HAROLD REGIS**, 1712 Montpelier Ave., Pittsburgh, Pa. (Age 21. Born Pittsburgh, Pa.) 1931 B. S. in Civ. Eng., Carnegie Inst. Tech. *TT 4: P 4.*—Summers Rodman, Meadville Div., Erie R. R. (1929) and with National Safety Council, research on effect of heat treatment on chains (1930). *TT 4: P 4.* Refers to F. J. Evans, F. M. McCullough, C. B. Stanton, H. A. Thomas.

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(2) **WELLS, HEBER**, 25 Fairview Terrace, Malden, Mass. (Age 23. Born Malden, Mass.) 1931 S. B. in Civ. Eng., Harvard Univ. *TT 4: P 4.* Refers to G. M. Fair, A. Haertlein.

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(14) **WENGER, FRANCIS EDWARD, Jr.**, 3937 Maffitt Ave., St. Louis, Mo. (Age 25. Born St. Louis, Mo.) 1931 B. S. in Civ. Eng., Mo. School of Mines. *TT 4: P 4.*—May to Sept. 1926 with United Railways Co., St. Louis, Mo., on overhead valuation survey.—May 1927 to Sept. 1928 with Mississippi River Comm., 3 months on low water survey, then in charge high water discharge work. *TT 1.2: P 1.2: RC 1.*—May 1928 to Sept. 1930 Surveyor, City of St. Louis, Mo., in charge of construction. *TT 2.3: P 2.3: RC 2.3.*—*TT 7.5: P 7.5: RC 3.3.* Refers to C. E. Bardsley, H. C. Beckman, J. B. Butler, E. W. Carlton, E. G. Harris.

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(12) **WERNER, ARTHUR VINCENT**, 617 Elm St., Moscow, Idaho. (Age 27. Born Giltner, Nebr.) 1931 B. S. in C. E., Univ. of Idaho. *TT 4: P 4.* Refers to I. N. Carter, I. C. Crawford, J. W. Howard.

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(16) **WHITCOMBE, FRANCIS HENRY**, 110 Cleveland St., Anamosa, Iowa. (Age 21. Born Ogden, Utah.) 1931 B. S., Iowa State Coll. *TT 4: P 4.* Refers to T. R. Agg, R. A. Caughey, J. S. Dodds, W. L. Foster, A. H. Fuller, W. E. Galligan, A. Marston, L. O. Stewart.

875

(9) **WIGGINTON, JAMES GIBSON**, 1764 Castlebury Rd., Louisville, Ky. (Age 23. Born Louisville, Ky.) 1931 B. S. in Civ. Eng., Speed Sci. School, Univ. of Louisville. *TT 4: P 4.*—Summer 1926 Rodman, and Inspector of pile driving, on construction of Dam No. 52, Brookport, Ill. for U. S. Govt.—1927 to 1929 (co-operative work) Rodman, Louisville Comms. of Sewerage, on sewer construction and topographic surveying (June to Sept. 1927), Rodman and Draftsman (March to Sept. 1928) and Rodman (March to June 1929), Louisville & Nashville R. R. Co.—*TT 4: P 4.* Refers to W. R. McIntosh, W. B. Wendt.

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(8) **WILEY, TARLEY TARSON**, 1016 West Clark St., Champaign, Ill. (Age 23. Born Champaign, Ill.) 1930 B. S. in C. E., and 1931 M. S. in C. E., Univ. of Ill. *TT 4: P 4.*—Summers Draftsman, Rodman and Instrumentman, City Engr.'s office, Champaign, Ill., and Material Clerk, Kent & Co., Paving Contra. (1926); on surveys, plans and estimates for village street pavements and farm-drainage systems with C. B. Schmeltzer, Engr., Champaign, Ill. (1927), independent work making topographic maps and layouts for landscapes, also surveys, plans and estimates for cleaning drainage ditch (about 12 000 ft.) (1927 and 1930); Laboratory Asst. testing highway materials (1928) and Jun. Highway Engr. in charge of a section of concrete pavement construction on State Route 142 near Salem (1929) for Illinois Div. of Highways; Laboratory Asst., Materials Testing Laboratory, Univ. of Illinois (1930).—*TT 4: P 4.* Refers to W. C. Huntington, F. C. Lohmann, G. W. Pickels, T. C. Shedd, J. Vawter, W. M. Wilson.

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(10) **WILKERSON, JOHN MATTHEW, Jr.**, 904 Barnett Pl. N. E., Atlanta, Ga. (Age 21. Born Kansas City, Mo.) 1931 B. S. in C. E., Ga. School Tech. *TT 4: P 4.* Refers to R. P. Black, F. C. Snow.

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(9) **WILL, CHARLES CHRISTIAN**, 2431 Montgomery St., Louisville, Ky. (Age 23. Born Louisville, Ky.) 1931 B. S. in C. E., Speed Sci. School, Univ. of Louisville. *TT 4: P 4.*—1927 and 1928 (co-operative work) Inspector and Rodman, Louisville Park Comm. (June to July 1927), Rodman, Louisville Comms. of Sewerage (July to Sept. 1927) and Draftsman and Rodman for D. X. Murphy & Bros., Archts., Louisville, Ky. (Jan. to Oct. 1928).—*TT 4: P 4.* Refers to W. R. McIntosh, W. B. Wendt.

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(15) **WILLIAMS, HERBERT LESTER**, 4400 Dauphine St., New Orleans, La. (Age 29. Born Maxville, Ind.) 1924 B. S. of C. E., Purdue Univ. *TT 4: P 4.*—June 1924 to Oct. 1925 Draftsman and Jun. Civ. Engr., U. S. Engr. Dept., Florence, Ala., on design and detail of masonry dams, navigation lock walls and gates and appurtenances, and calculation and compilation of hydraulic power data. *TT 1.2: SP 0.2: P 1.*—Nov. 1925 to March 1926 Inspector and Designer for Huff & Roberts, Civ. and Cons. Engrs., Miami, Fla., supervising municipal improvements and laying out subdivisions. *TT 0.4: P 0.4.*—April 1926 to April 1928 with Alabama State Docks Comm., Mobile, Ala., until Oct. 1927 as Asst. Designing Engr. on design and investigation of reinforced concrete apron wharves with reinforced concrete pile foundations and design of concrete warehouses and steel railway bridges on wood pile foundations, and after Nov. 1927 Field Engr. supervising construction of reinforced concrete apron wharf, including preparation of estimates. *TT 2.1: P 2.1: RC 0.5.*—May to Nov. 1928 Designer and Structural Draftsman, Mobile Steel Co., on design of steel office and mill buildings, schools and assembly halls, also estimating. *TT 0.6: P 0.6: RC 0.6: D 0.6.*—Dec. 1928 to date with U. S. Engr. Dept., New Orleans, La., until Oct. 1930 as Asst. and Associate Engr. on reports of investigations of rivers and streams in southern Louisiana, and design of new navigation lock and appurtenances for Intracoastal Waterway at Harvey, La., and since Nov. 1930 Associate and Civ. Engr. in responsible charge of design and construction of this lock and of operation and care of existing lock. *TT 2.6: P 2.6: RC 0.7: D 0.7.*—*TT 10.9: SP 0.2: P 10.7: RC 1.8: D 1.2.* Refers to P. G. Bruton, J. P. Ewin, W. L. Sibert, L. C. Smith, W. B. Smith, R. B. Tinsley, C. A. D. Young.

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(15) **WILSON, JOHN WADSWORTH**, 7916 Oak St., New Orleans, La. (Age 21. Born New Orleans, La.) 1931 B. E. in C. E., Tulane Univ. *TT 4: P 4.* Refers to D. Derickson, W. B. Gregory.

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(14) **WILSON, LOREN ALEXANDER**, Tenth and Oak Streets, Rolla, Mo. (Age 22. Born Crane, Mo.) 1931 B. S. in C. E., Mo. School of Mines. *TT 4: P 4.* Refers to C. E. Bardsley, J. B. Butler, E. G. Harris, C. V. Mann.

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(1) **WINSTON, HERBERT OWEN**, 14 Overlook Ave., West Orange, N. J. (Age 23. Born Newark, N. J.) 1931 B. S. in Civ. Eng., Washington and Lee Univ. *TT 4: P 4.*—June 1926 to Sept. 1927 Instrumentman and (at times) Head of Party for Freeman & Winston, Civ. and Cons. Engrs., West Orange, N. J. *TT 0.6: SP 0.6.*—*TT 4.6: SP 0.6: P 4.* Refers to I. T. Redfern, F. Williams.

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(8) **WOOD, GEORGE McCRAW**, 127 South Wood St., Maroa, Ill. Graduating student awarded Illinois Section prize. (Age 25. Born Maroa, Ill.) 1931 B. S., Univ. of Ill. *TT 4: P 4.*—1927 to 1929 Apprentice Structural Draftsman, Mississippi Valley Structural Steel Co. *TT 1: SP 1.*—*TT 5: SP 1: P 4.* Refers to J. J. Doland, W. C. Huntington.

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(10) **WOODS, ROBERT JAMES, Jr.**, 1023 Lanier Blvd., Atlanta, Ga. (Age 25. Born Nashville, Tenn.) 1928 B. E., Vanderbilt Univ. *TT 4: P 4.*—June 1929 to date with Wilson-Weesner-Wilkinson Co., 9 months as Draftsman in Nashville, then Office Engr. until 1931 in Knoxville, and since Jan. 1931 with W. C. Caye & Co. Div. of Company at Atlanta, Ga., detailing, planning and designing reinforced concrete work and reinforcing steel, also selling and servicing the steel. *TT 2.1: SP 0.9: P 1.2: RC 1.1: D 0.4.*—*TT 6.1 SP 0.9: P 5.2: RC 1.1: D 0.4.* Refers to W. C. Caye, Jr., W. A. Coolidge, F. J. Lewis, W. H. Schuerman, E. B. Wilkinson.

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(1) **WREDE, FREDERICK WILLIAM, Jr.**, 8309 Fillmore Ave., Jackson Heights, N. Y. (Age 33. Born Hoboken, N. J.) Sept. 1920 to June 1924 student Coll. of Civ. Eng., Cornell Univ. *TT 2: P 2.*—Feb. 1917 to Jan. 1919 with Arronberg, Porter & DeWitt, drilling and blasting for highway construction in New Jersey. *TT 1: SP 1.*—Jan. 1919 to Sept. 1920 Foreman, Bronx Parkway Comm., constructing retaining walls, sewer systems, levees, highway bridges, roads and grading. *TT 0.3: SP 0.3.*—Sept. 1920 to June 1924 (while student) made special study of shield and compressed air tunneling of Holland Tunnels.—June to Nov. 1924 Asst. Res. Engr. with Gavin Hadden, New York City, on construction of Cornell Crescent (stadium) at Ithaca, N. Y. *TT 0.2: P 0.2.*—Nov. 1924 to July 1925 Supt. of Constr., until March 1925 with Mathews Constr. Co., Princeton, N. J., on dormitory for Wellesley (Mass.) Coll., then with Spalding Constr. Co., New York City, on two airports at Teterboro, N. J., and one at College Point, N. Y. *TT 0.7: P 0.7: RC 0.7.*—July 1925 to March 1926 Chf. of Party, Public Service Co. of New Jersey, on transmission lines at Kearny

and Trenton, N. J., and railroads at New Brunswick, N. J. *TT 0.7: P 0.7: RC 0.7.*—March 1926 to Jan. 1927 supervising construction, and April to Oct. 1927 Res. Engr. on construction, Northwestern Univ. stadium, Evanston, Ill., for Gavin Hadden, New York City. *TT 1.4: P 1.4: RC 1.4.*—Jan. to April 1927 Supt. of Constr., Barney-Ahlers Constr. Co., on flat-slab industrial building, Long Island City, for Excelsior Quilting Co. *TT 0.3: P 0.3: RC 0.3.*—Jan. 1929 to April 1930 with Fred T. Ley Co., New York City, as Supt. in charge of steel arches, elevators, etc. on Chrysler Bldg. *TT 1.3: P 1.3: RC 1.3.*—Oct. 1927 to Jan. 1929 and April 1930 to date with George A. Fuller Co., New York City, until Feb. 1928 on Bamberger's store, Newark, N. J., Feb. 1928 to Jan. 1929 Asst. Supt. following structural steel erection and steel changes on Fuller Bldg., New York City, and since April 1930 Supt. in charge of certain operations on City Bank & Farmers Trust Bldg., New York City. *TT 2.4: SP 0.2: P 2.2: RC 2.2.*—*TT 10.5: SP 1.9: P 8.6: RC 6.6.* Refers to G. F. Baker, R. E. Carrick, G. Hadden, C. A. Holden, A. Rodriguez.

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(3) **WRIGHT, GEORGE CREIGHTON**, 1609 Culver Road, Rochester, N. Y. (Age 52. Born Ogdensburg, N. Y.) 1903 C. E., Cornell Univ. *TT 4: P 4.*—July to Aug. 1903 Draftsman with Purdy & Henderson, New York City, on structural steelwork; Aug. 1903 to Jan. 1904 Draftsman and Instrumentman, O'Rourke Eng. Constr. Co., making and checking extensions on estimates. *TT 0.3: SP 0.3.*—Jan. 1904 to Jan. 1906 Draftsman, Turner Constr. Co., interviewing architects and owners of reinforced concrete buildings, selling steel reinforcement. *TT 1: SP 1.*—Jan. 1906 to Jan. 1907 with Unit Concrete Steel Frame Co., Philadelphia, Pa., as Office Mgr. at Rochester, N. Y., detailing and designing reinforced concrete buildings and soliciting building construction in three states. *TT 0.7: SP 0.2: P 0.5: D 0.5.*—Jan. 1907–Dec. 1908 in private practice, designing and superintending reinforced concrete building construction for Alling & Cory, Stecher Lithograph Co., Yawman & Erbe, Eastman Kodak, Flower City Charcoal Co., all of Rochester, and others. *TT 2: P 2: RC 1: D 1.*—Dec. 1908 to date with Monroe County, N. Y., until Jan. 1911 as Asst. to County Supt. of Highways, being Designer and Supervisor of bridge construction, then (10 years) Asst. Engr. in charge of design and supervising construction of bridges and highways, and since May 1921 County Supt. of Highways, in charge of all county road and bridge work and of maps and surveys for other county departments. *TT 20.1: SP 1.5: P 19.5: RC 19.3: D 4.5.*—*TT 29: SP 3: P 26: RC 20.3: D 6.* Refers to E. A. Fisher, W. S. Lozier, I. E. Matthews, T. J. Morrison, C. A. Poole, J. F. Skinner, W. E. Weller.

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(9) **YOUNGQUIST, CARL VERNON**, 1695 Wyandotte Rd., Columbus, Ohio. (Age 27. Born St. Paul, Minn.) 1927 B. S. C. E., Univ. of Minn. *TT 4: P 4.*—June 1924 to June 1927 and Sept. 1927 to Jan. 1928 with City of St. Paul, Minn., until March 1925 as Rodman, Bureau of Eng., on surveys, and remainder of time Draftsman, Bureau of Water, from March to Sept. 1925 on plans for a conduit and for improvement and maintenance of filtration and pumping plant and pipe castings for 300 000-gal. steel tank, Sept. 1925 to June 1927 (while student) on maps and plans of water-works system, summers acting as Inspector on construction of 90-in. Vadsnals conduit and as Gravel Plant Inspector and after Sept. 1927 acting as Instrumentman on surveys, and on plans and design for maintenance of water-works system. *TT 0.8: SP 0.8.*—June to Sept. 1927 Draftsman, Northern Pacific Ry. *TT 0.1: SP 0.1.*—Jan. to March 1928 Jun. Engr., Illinois Div. of Highways, Dixon, Ill., being Draftsman and Computer for right-of-way and condemnation maps. *TT 0.1: SP 0.1.*—March 1928 to March 1930 Jun. Engr., and March 1930 to date Asst. Engr., U. S. Geological Survey, Water Resources Branch, Columbus, Ohio, on stream-gauging work, in charge of construction of reinforced concrete houses and wells for water-stage recorders in Indiana and Ohio, on office computations, plans and design of standards plans for water-gauging equipment. *TT 3.2: P 3.2: RC 2.*—*TT 8.2: SP 1: P 7.2: RC 2.* Refers to F. Bass, E. F. Codrington, N. C. Grover, J. C. Hoyt, L. Lee, H. T. Munn, J. R. Shank.

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(7) **ZAHORIK, PETER ANTON**, 642 Ninth Ave., Wauwatosa, Wis. (Age 36. Born Milwaukee, Wis.) 1920 B. S., Univ. of Wis. *TT 4: P 4.*—July 1915 to July 1916 Draftsman, Fraser Co., Milwaukee, Wis., on flour mill layouts. *TT 0.7: SP 0.4: P 0.3.*—June 1917 to June 1919 Asst. to Maintenance Engr., Allis Chalmers Co., Milwaukee, surveying, drafting and structural steel and reinforced concrete design for alterations and additions to plant. *TT 1.5: SP 0.5: P 1: D 0.5.*—July 1920 to Feb. 1921 Structural Detailer, Wisconsin Bridge & Iron Co., Milwaukee, in drafting room and shop work. *TT 0.4: SP 0.1: P 0.3.*—March 1921 to May 1922 Structural Steel Designer and Estimator, Worden Allen Co., Milwaukee. *TT 1.2: P 1.2: RC 0.7: D 0.7.*—May 1922 to Feb. 1923 with Concrete Eng. Co., Milwaukee, estimating, drafting and reinforced concrete design. *TT 0.7: SP 0.2: P 0.5:*

RC 0.3: D 0.3.—Feb. 1923 to date with Kalman Steel Co., Milwaukee, drafting, estimating, selling and designing reinforced concrete structures. *TT 7.9: SP 0.5: P 7.4: RC 6: D 6.2.*—*TT 16.4: SP 1.7: P 14.7: RC 7: D 7.7.* Refers to H. H. Brown, A. P. Clark, C. Craggs, H. L. Foster, F. J. Hanmer, W. S. Thomson, R. S. Williams.

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(5) **ZEPP, PAUL LATIMER**, 21 East B Street, Brunswick, Md. (Age 24. Born in Alexandria County, Va.) 1931 B. E., Johns Hopkins Univ. *TT 4: P 4.*—Summer 1927 and June 1928 to date (while student) Apprentice, Baltimore & Ohio R. R., acting as Trackman, Asst. Track Foreman, Track Foreman, and Track Supervisor.—*TT 4: P 4.* Refers to G. S. Crites, J. H. Gregory, E. Stimson, J. T. Thompson.

FOR TRANSFER

FROM THE GRADE OF ASSOCIATE MEMBER

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(10) **AKERS, ELTON DOUGLAS**, Assoc. M., 1214 Linden Ave., Nashville, Tenn. (Elected Nov. 26, 1923.) (Age 44. Born Jeanerette, La.) Licensed Engr., State Tennessee.—May 1910 to May 1913 with Southern Pacific Lines, 1 year as Rodman and 2 years Asst. Engr., in charge of work order construction, work trains, steam shovels, new yards, Lafayette Terminal, etc. *TT 2.5: SP 0.5: P 2: RC 2.*—June 1913 to Dec. 1914 Res. Engr., Tela (Honduras) R. R. Co., on relocation and construction of 13 miles main line and 27 miles feeders. *TT 1.5: P 1.5: RC 1.5.*—1915–1916 in private practice, irrigation, location and surveying; after 1916 (at intervals) surveying, etc., at and near Jeanerette, La. *TT 2: P 2: RC 2: D 1.*—June to Sept. 1919 Farm Engr., Mercedita Sugar Co., Cabanas, Cuba, mapping and location. *TT 0.3: P 0.3: RC 0.3.*—June to Aug. 1920 Asst. Engr., Pearl River Valley Ry., Picayune, Miss., in charge of location and construction. *TT 0.2: P 0.2: RC 0.2.*—June 1922 to March 1923 with City of Nashville, Tenn., until Oct. 1922 as Instrumentman, then Asst. Engr., on street construction and improvement, being in responsible charge, supervising, laying grades, designing intersections and entrances to New River Terminal. *TT 1.6: P 1.6: RC 1.2: D 0.6.*—Jan. 1924 to date with State Dept. of Highways and Public Works, Nashville, Tenn., 1 month as Inspector, 5 months Jun. Engr., 4 years Res. Engr. and Senior Res. Engr., supervising contract-highway engineering and construction State and Federal Aid, locating and designing plans for Federal Aid Projects 56A, 56B and 67A, Davidson County, and since Aug. 1928 Asst. Div. Constr. Engr. and Asst. Constr. Engr. in responsible charge of contract construction and design for construction changes, redesign of roadways, supervising construction engineers, etc. *TT 7.5: P 7.5: RC 6.8: D 3.2.*—*TT 15.7: SP 0.5: P 15.2: RC 14.1: D 4.8.* Refers to C. W. Butts, L. R. Currey, Jr., N. W. Dougherty, A. J. Dyer, C. N. Harrub, A. M. Shaw, C. B. Wilson, W. H. Wilson.

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(2) **BABCOCK, JOHN BRAZER**, 3d, Assoc. M., 21 Orient Ave., Newton Centre, Mass. (Elected Jan. 15, 1923.) (Age 42. Born Boston, Mass.) 1910 S. B., Mass. Inst. Tech. *TT 4: P 4.*—July 1910 to Jan. 1911 Asst. to Res. Engr., Middle Div., Grand Trunk Ry., Toronto, Ont., on maintenance-of-way, etc. *TT 0.6: P 0.6.*—Feb. 1911 to March 1912 Instrumentman, Canadian Pacific Ry., on construction (double track and grade revisions) and location. *TT 1.2: P 1.2.*—April to Dec. 1912 Res. Engr., Southern New England R. R. Corporation (G. T. Ry.), Millville, Mass., on construction (8 miles). *TT 0.8: P 0.8: RC 0.8.*—Jan. 1913 to Jan. 1914 Res. Engr., Ambursen Hydr. Constr. Co., Ltd., Montreal, Que., on construction of hollow reinforced concrete dams at Donnacona, Que., and Swift Current, Saskatchewan. *TT 1.1: P 1.1: RC 1.1.*—Feb. 1914 to Oct. 1915 Designing Engr., Ambursen Hydr. Constr. Co., of Canada, Ltd., and Raymond Concrete Pile Co. of Canada, Ltd., Montreal, in charge of design and estimating for hydraulic structures and pile foundations. *TT 1.8: P 1.8: RC 1.8: D 1.8.*—Nov. 1915 to Feb. 1916 Engr. and Statistician, Terminal Comm., Boston, Mass., investigating terminal facilities. *TT 0.3: P 0.3.*—March 1916 to date at Massachusetts Inst. of Technology, until Sept. 1919 as Instructor in Civ. Eng., Oct. 1919 to Sept. 1925 Asst. Prof., and Oct. 1925 to Sept. 1928 Associate Prof. of Ry. and Highway Eng., in charge of various courses; since Oct. 1928 Prof. of Ry. Eng., in charge of co-operative course in R. R. Operation, at the Inst., and on Boston & Maine R. R., etc. since 1919 also on miscellaneous consulting engineering and design, Editor, Journal, Boston Soc. C. E., etc. *TT 15.4: P 15.4: RC 11.8: D 11.8.*—*TT 25.2: P 25.2: RC 15.5: D 13.6.* Refers to W. J. Backes, H. K. Barrows, C. B. Breed, H. F. Eddy, J. C. Irwin, C. T. Main, L. E. Moore, C. E. Smith, C. M. Spofford, F. E. Winsor.

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(4) **BAKER, SAMUEL**, Assoc. M., 1004 Monroe Ave., Scranton, Pa. (Elected Dec. 5, 1927.) (Age 38. Born Smorgon, Russia.) 1913 B. E., and 1919 C. E., Cooper Union. *TT 4: P 4.*—May to Dec. 1913 Structural Draftsman, American Bridge Co., Brooklyn (N. Y.) Plant, detailing steelwork for industrial buildings, school houses and subway construction. *TT 0.3: SP 0.3.*—Dec. 1913 to June 1916 Jun. Asst. and Draftsman, Public Service Comm. of New York, 1 year surveying and assisting on supervision of construction of Seventh Ave. Subway and remainder of time on design drawings for subway and tunnel construction, 1 year being responsible for design. *TT 1.7: SP 0.7: P 1: RC 1: D 1.*—June 1916 to Nov. 1919 Draftsman, Pittsburgh & Lake Erie R. R., designing and drafting locomotive coaling plants, car-repair shops, small power houses, sheds, culverts, retaining walls, etc. *TT 3.3: SP 0.3: P 3: RC 3: D 3.*—Nov. to Dec. 1919 Designer, E. I. duPont de Nemours & Co., Wilmington, Del., on design drawings for reinforced-concrete factory buildings for Gen. Motors Corporation. *TT 0.1: P 0.1: RC 0.1: D 0.1.*—June to Nov. 1926 Designer, 1 month with J. A. L. Waddell, New York City, on design drawings for bridges, then with Erie R. R. Co., on designs and estimates for steel and reinforced concrete bridges and grade-crossing elimination projects; made preliminary designs and estimates for grade-separation project (\$4 000 000) at Elmira, N. Y. *TT 0.4: P 0.4: RC 0.3: D 0.4.*—Dec. 1919 to June 1926 and Nov. 1926 to date with International Correspondence Schools, until June 1926 as Asst. Principal and Principal, and since Nov. 1926 Asst. Director (6 months) and Director, Civ. Eng. Schools, writing and editing texts and handbooks on civil engineering subjects, involving considerable designing, supervising work of writers and instructors, etc., responsible for all texts on civil engineering subjects published by International Textbook Co. *TT 11: P 11: RC 7.5.—TT 20.8: SP 1.3: P 19.5: RC 11.9: D 4.5.* Refers to F. E. Foss, W. A. Hardenbergh, G. M. Purver, A. R. Raymer, C. K. Smoley, E. E. R. Tratman, J. P. J. Williams.

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(4) **BROOMALL, CAROLUS MORTON**, Assoc. M., 341 East State St., Media, Pa. (Elected Nov. 9, 1920.) (Age 61. Born Upper Providence, Pa.) Registered Prof. Engr., State of Pennsylvania.—1891 to 1892 on surveying and location, Delaware County & Philadelphia Elec. Ry., Clifton to Media, Pa., including 100-ft. span steel bridge. *TT 0.9: SP 0.1: P 0.8: RC 0.8: D 0.1.*—1892 to 1920 Borough Surveyor, 1911 to date Bldg. Inspector, and 1920 to date Borough Engr., Media, duties included surveys, designs, plans and supervision of street work, water-mains, sewer extensions, design of a small bridge, several brick arches, test pits and soil investigation for new post-office building, charge of bacteriological and chemical laboratory at water-works, design of flood-walls, sluice-way, head-gates, aeration apparatus, etc., preliminary surveys and plans for sewerage system, design and installation of hydraulic power plant at water-works; Engr. in charge of dredging water-works dam, Sanitary Engr. and Chemist in charge of operation of water-works, and of sewage-disposal plant, designing improvements at pumping-station and disposal plant, etc.; design for strengthening 60-span girders for public school auditorium, and surveys and plans for improving Sports Field; also 1900 to 1919 designed and superintended construction of two steel girder and six reinforced concrete bridges, a plate girder bridge and a brick arch (spans 15 to 45 ft.) for Delaware County; 1908 to 1920 Teacher, Eng. Dept., Drexel Inst., Philadelphia, Pa.; 1909 (6 months) Borough Surveyor, Morton, Pa.; 1913 on drainage survey of roads, street regulation and design of several reinforced culverts, etc., for Nether Providence Township; 1915 to 1916 survey and preliminary report on proposed sewerage system, Llanerch, Pa., checked and modified design for new steel mill building, and designed 45-ft. span steel bridge for American Dyewood Co., Chester, Pa.; 1919 designed trusses for large garage, Media; 1920 on surveys and report for proposed sewerage system for Bowling Green, Nether Providence, Pa.; 1920 to 1921 Asst. Chemist in sugar analysis at Central Espana, Perico, Cuba; 1922 to 1931 Borough Engr. and Bldg. Inspector, Swarthmore, Pa., on plans, specifications and supervision of street work, bridges, sewer extensions, etc.; 1922 levels, gaugings, analyses and report on water supply, 1925 on design and supervision of new sludge beds for disposal plant of, and 1926 examination and report on, water-supply improvements, all for Elwyn Training School; 1924 levels, analyses, and report for improvement for private water supplies for E. E. Creighton, Upper Providence, and Lawrence Bodine, Marple Township; 1924 levels, design and supervision, new storm sewers, Media Athletic Grounds; 1925 gaugings, analyses, etc., for proposed addition to water supply, Delaware County Home; 1926 on levels and report on proposed extension of sewer system, Cheyney (Pa.) State Normal School; design of steelwork for proposed improvement of Town Hall, Swarthmore, Pa.; 1927 regulation of streets, design of street and sewer system, supervision of construction, Clarke and Harvey Annexation, Swarthmore; 1928 on street regulation, drainage and sewerage problems, South Media, Nether Providence; design and supervision of 45-ft. steel girder bridge over Ridley Creek, Upper Providence; design and supervision of steel and concrete viaduct (105 ft. long), Swarth-

more Ave., Swarthmore; street regulation and sewer design, Kimmell Annexation, Swarthmore; 1929 on street regulation and design of sewers, Swarthmore Estates Annexation, and design and supervision of two small reinforced concrete bridges over Little Crum Creek, Swarthmore, and of storm sewers for northern section of Swarthmore Borough, of street system, Wallingford Manor, Nether Providence, Pa., of new water main, Media to Rose Valley, and of girder bridge (45 ft.) over Ridley Creek, Upper Providence, Pa.; also various other short engagements (detailed statement given in application). *TT 38.9: P 38.9: RC 38.9: D 0.1.—TT 39: SP 0.1: P 38.9: RC 38.9: D 17.4.* Refers to W. Easby, Jr., B. Franklin, J. F. Murray, H. C. Smith, J. C. Trautwine, 3d.

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(11) **BURT, EARLE ANDREWS**, Assoc. M., 1147 East Mendocino St., Altadena, Cal. (Elected Junior March 12, 1918; Assoc. M. May 8, 1922.) (Age 40. Born Taunton, Mass.) 1915 B. S., Cal. Inst. Tech. (Throop Coll. Tech.) *TT 4: P 4.—*Summers 1910–1914 Laborer, Mt. Wilson Observatory, Pasadena, Cal., steel and concrete construction.—July 1915 to date with Los Angeles County Road Dept., until July 1916 as Laborer with survey party, July 1916 to Sept. 1918 Asst. Highway Engr., drafting, surveys, inspection, estimates, Sept. 1918 to Sept. 1919 Jun. Civ. Engr. (acting as Dist. Engr.), and Sept. 1919 to April 1925 Senior Civ. Engr. (Dist. Engr.), in charge of maintenance; since April 1925 Constr. Engr., supervising all highway contract construction. *TT 14.7: SP 0.5: P 14.2: RC 13: D 6.2.—TT 18.7: SP 0.5: P 18.2: RC 13: D 6.2.* Refers to O. F. Cooley, W. E. Jessup, G. W. Jones, F. H. Joyner, F. Thomas.

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(5) **BUTLER, MILLARD ANGLE**, Assoc. M., 703 Graydon Ave., Norfolk, Va. (Elected Jan. 3, 1911.) (Age 51. Born Minneapolis, Minn.) 1899 to 1901 (1½ years) Student in Civ. Eng., Univ. of Minn. *TT 0.5: P 0.5.—*Jan. to June 1901 Draftsman, Chicago Great Western Ry. *TT 0.2: SP 0.2.—*June 1901 to Jan. 1908 with Great Northern Ry., one year as Draftsman, 11 months Asst. Engr., on maintenance of way, Montana and Butte Divs., April 1903 to Feb. 1905 Res. Engr. on construction of 17-mile residency in Cabinet Mts., including division terminal at Whitefish, Mont., later in charge of grade and alignment revision (100 miles) on Willmar Div., Minnesota; Feb. 1905 to Oct. 1906 Office Engr. for Res. Engr., Western Dist., on plans and cost estimates for improvements; after Oct. 1906 Locating Engr. on main line revision (148 miles), spurs (64 miles), etc. *TT 6: SP 0.5: P 5.5: RC 2.9: D 1.8.—*Jan. to March 1908 Asst. Engr., Spokane & Inland Ry., on completion of Nine Mile Dam project. *TT 0.2: P 0.2: RC 0.2.—*March to Oct. 1908 Engr.-in-Chg., Eastern British Columbia Ry., Macgillivray, B. C., on location (64 miles) through Rocky Mts. and construction (28 miles) to Corbin coal fields. *TT 0.7: P 0.7: RC 0.7: D 0.3.—*Oct. 1908 to May 1909 Chf. Draftsman and Asst. Engr., North Coast Ry., Spokane, Wash., on plans and estimates for bridges across Spokane, Palouse, Snake and Yakima Rivers, detailed plans and construction of bridge across Columbia River at Kennewick, Wash., and general supervision of location and construction of various lines in Oregon, Washington and Idaho. *TT 0.7: P 0.7: RC 0.7: D 0.7.—*April 1910 to May 1911 in private practice, Spokane, work included location and construction of a railway (18 miles) in Cabinet Mts., acting as Eng. Counsel in litigation cases, etc. *TT 1: P 1: RC 1: D 0.3.—*May 1909 to April 1910 and May 1911 to Oct. 1916 with Great Northern Ry., until April 1910 and May to Dec. 1911 as Locating Engr. on location (90 miles), change of line (22 miles) and reconnaissance, and (after May 1911) in charge of location of V. V. & E. Ry. over Coquihalla Pass of Cascade Mts.; Dec. 1911 to April 1912 Asst. Engr., at Spokane, on studies for rearrangement of operating divisions and location of various connecting lines), April to Oct. 1912 Div. Engr., locating revision of main line down east slope of Rocky Mts. and in charge of highway construction (72 miles), two large hotels and about 100 chalets in Glacier Park; Oct. 1912 to June 1914 Locating Engr., on 180 miles of main line of Montana Eastern Ry. and 170 miles of branch lines, etc.; June to Oct. 1914 Chf. Engr., Somers Lumber Co., during location and construction of Swan River Ry.; Oct. 1914 to Oct. 1916 Div. Engr., on 2 300 miles Federal valuation, also acting as Office Engr. for Chf. Engr. of construction of branch lines, etc. *TT 6.5: P 6.5: RC 6.5: D 4.7.—*Oct. 1916 to June 1917 Chf. Engr., Twin City Belt Line Ry. (\$11 000 000 terminal project). *TT 0.7: P 0.7: RC 0.7: D 0.7.—*June 1917 to April 1920 with U. S. Army, until April 1918 as Major, then Colonel, Q. M. C., Constr. Div., in charge of construction, including a cantonment, a hospital, water supply for Norfolk (Va.) Base, coke and by-products plant in Buffalo, N. Y., etc. (total over \$46 000 000); 1918 double tracked 8 miles of Virginian Ry. and constructed a high-tension transmission line (80 miles) Richmond to Suffolk, Va., etc.; 1918–1919 member and Vice-Chairman, Board of Control of War Construction Activities in tide-water district. *TT 2.8: P 2.8: RC 2.8: D 2.8.—*Aug. to Dec. 1920 Engr., Atlantic Salvage Co., on design and construction of special ship-salving equipment. *TT 0.4: P 0.4: RC 0.4: D 0.4.—*Dec. 1920 to April 1922 and Dec. 1923 to Dec. 1925 in private practice at Norfolk,

Va., general engineering, including engineering for Porter Bros., Contrs. at Norfolk Municipal Terminal, and on construction of Glenn Rogers Branch of Virginian Ry., also Eng. Counsel in various litigation cases, etc. *TT 1.3: P 1.3: RC 1.3: D 0.4.*—April 1922 to Dec. 1923 Pres., Hampton Roads Coal and Bunkering Corporation, designed and built coal-storage and bunkering plant and supervised initial operation. *TT 1.7: P 1.7: RC 1: D 0.4.*—Dec. 1925 to Dec. 1927 Chf. Engr., W. H. French Wrecking & Dredging Co., on various dredging contracts on Atlantic Coast. *TT 2: P 2: RC 2: D 0.8.*—Dec. 1927 to June 1931 Chf. Engr. and Cons. Engr., Ulen & Co.; Jan. 1928 to June 1930 assisted in negotiation for contract for engineering and construction for Persian Govt. and was Chf. Engr. of Southern Sec. of work consisting of railway location (870 km.) and construction (251 km.) detailed plans for entire system and detailed working plans for line constructed, including bridge across Karun River at Ahwaz, division terminals at Ahwaz and Dizful, water supplies and fuel-oil stations, a dam for Karun River at Ahwaz (estimated cost \$10 000 000), city plan, including water supply, sewerage, streets and pavements, electric power and lighting and railway and marine terminal for proposed new port of Bander Shahpour; plan for new city on north side of Karun River at Ahwaz and preliminary studies for proposed 8-km. tunnel to carry water from upper Karun to irrigate interior plateau; 1930 in Honduras studying and reporting on proposed transcontinental extension of National Ry. *TT 3.4: P 3.4: RC 3.4: D 3.4.*—*TT 30.2: SP 0.8: P 29.4: RC 25.6: D 17.2.* Refers to O. S. Bowen, R. Budd, L. Bush, H. Fernstrom, M. R. Keefe, G. H. Massey, F. L. Nicholson, E. G. Taber, M. E. R. Toltz, G. F. D. Trask, A. M. Traugott, M. J. Whitson.

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(2) DOW, PETER STAUB, Assoc. M., Box 83, Hanover, N. H. (Elected June 18, 1918.) (Age 44. Born Knoxville, Tenn.) 1911 C. E., Thayer School of Civ. Eng., Dartmouth Coll. *TT 4: P 4.*—1906 to 1909 (at intervals) Instrumentman, Rodman, etc., on trail and road surveys, etc.—June to Sept. 1911 Asst. Supt., Hastings Pavement Co., New York City, on construction of block asphalt pavements in Brooklyn and Astoria, N. Y. *TT 0.3: P 0.3: RC 0.3.*—1911 to 1917 Instructor, 1917 to 1925 Asst. Prof., and 1925 to date Prof. and Chairman, Dept. of Graphics and Eng., Dartmouth Coll.; also summers 1913 and 1914 Instructor, Stevens Inst. of Technology, Hoboken, N. J.; summer 1915 Road Asst., Association of American Portland Cement Mfrs., Philadelphia, supervising concrete road construction; summer 1910 Field Asst., and summer 1917 Instructor in Railroad Constr., Thayer School of Civ. Eng.; 1911 to 1918 in charge of various property and highway surveys for Mascoma River Improvement Co., Goose Pond power project, etc., *TT 20: P 20: RC 15.3: D 1.*—*TT 24.3: P 24.3: RC 15.6: D 1.* Refers to R. Fletcher, C. A. Holden, O. E. Hovey, R. R. Marsden, A. P. Richmond, Jr.

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(15) ENGLISH, HENRY WILLIAM, Assoc. M., 401 Mercantile Bldg., Dallas, Tex. (Elected Junior Nov. 12, 1913; Assoc. M. May 13, 1913) (Age 45. Born Jackson, Mo.) 1903 to 1904 student, Univ. of Missouri. *TT 0.5: P 0.5.*—Dec. 1904 to Jan. 1908 Shipping Clerk, Jackson (Mo.) Brick & Tile Co. (over 1 year), Rodman, St. Louis South Western R. R. (1 year) and Rodman and Transltman, St. Louis & San Francisco R. R. (1 year). *TT 1: SP 1.*—Jan. 1908 to Jan. 1909 Instrumentman and Chf. of Party, Joint Drainage Dist., New Madrid and Pemiscot Counties, Mo., Little River Drainage Dist. *TT 1: P 1: RC 0.5.*—Jan. 1909 to Jan. 1910 Res. Engr., Roden Coal Co., Marvel, Ala., on construction, topographical works, tipple, viaduct, transmission line and underground layout. *TT 1: P 1: RC 1.*—Jan. 1910 to Aug. 1912 Asst. Engr., until May 1912 with City of Tulsa, Okla., on design and construction of street paving and storm and sanitary sewers, then with Nagle & Petersen, Cons. Engrs., on design and construction of water supply system, Bennington, Okla., and design of sewer systems, Eufaula and Idabel, Okla. *TT 1.6: P 1.6: RC 1: D 0.8.*—Aug. 1912 to Feb. 1915 Asst. Engr. and Res. Engr., Chicago, Milwaukee & St. Paul Ry., on construction of double track (30 miles, \$3 000 000) in Iowa. *TT 2.4: P 2.4: RC 2.4: D 0.4.*—Feb. to Sept. 1915 Res. Engr. with P. A. Edquist, Cons. Engr., Omaha, on construction of sanitary sewer system (\$150 000). *TT 0.6: P 0.6: RC 0.6.*—Sept. 1915 to Oct. 1920 Office Engr. and Res. Engr., Little River Drainage Dist., Missouri, construction of levees, channels and bank protection (500 000 acres, \$9 000 000). *TT 5: P 5: RC 4: D 1.*—Oct. 1920 to date Res. Engr., Morgan Eng. Co., Memphis, Tenn., on construction, until Aug. 1922 of Inter River Drainage Dist. (125 000 acres, \$2 000 000, 55 miles earth levees, 208 miles channels, bridges and sluiceways), Aug. 1922 to March 1924 for Grand River Drainage Dist., Missouri (75 000 acres, \$600 000, river improvement and bridges), March 1924 to Oct. 1925 of McKinney Bayou Drainage Dist., Arkansas (31 900 acres, \$425 000, levees, channels, sluiceway and bridges), Oct. 1925 to July 1928 of Sub-Dist. No. 1, Drainage Dist. No. 8 and Sub-Dists. Nos. 3 and 4, Drainage Dist. No. 9, Mississippi County, Ark. (274 000 acres, \$1 550 000, levees, pumping plant and bridges), and after July 1928 of City and County of Dallas (Tex.) Levee Improve-

ment Dist. (\$6 500 000, levees, pumping plant, conduits, storm sewers, channels, hydraulic fills and streets). *TT 10.4: P 10.4: RC 10.4: D 2.5.—TT 23.5: SP 1: P 22.5: RC 19.9: D 4.7.* Refers to B. B. Brier, A. S. Fry, L. L. Hiding, J. M. Howe, W. C. Mundt, E. N. Noyes, E. F. Petersen, W. J. Powell, A. P. Rollins, N. H. Sayford, W. H. Vosburg, H. A. Wiersema.

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(7) **FARRELL, KINGSTON ALLEN**, Assoc. M., 2009 Vinewood Blvd., Ann Arbor, Mich. (Elected Aug. 30, 1926.) (Age 45. Born Newburgh, Ont., Canada.) Licensed Land Surveyor, Ontario. 1912 B. A. Sc. in Civ. Eng., Univ. of Toronto. *TT 4: P 4.—*Vacations 1908–1910 and April 1913 to May 1915 Asst. Surveyor with Spright & Van Nostrand, Land Surveyors, Toronto, Ont. *TT 2: P 2: RC 1.5: D 0.5.—*1911 to 1912 Rodman and Transittman, Canadian Pacific Ry. Co., maintenance of way. *TT 0.8: SP 0.3: P 0.5.—*May 1915 to June 1916 Asst. Engr. with M. E. Cooley, on valuation of Public Service Ry. & Elec. Cos., New Jersey. *TT 1: P 1: RC 0.5.—*July to Nov. 1916 Surveyor with David Beatty, on survey of Township of Foleyette, Ontario. *TT 0.4: P 0.4: RC 0.4.—*Dec. 1916 to June 1917 Engr. with M. E. Cooley, on valuation of Public Service Elec. Co., New Jersey. *TT 0.5: P 0.5: RC 0.5.—*June 1917 to Sept. 1919 Lieut., Canadian Engrs., in France. *TT 2: SP 0.2: P 1.8: RC 1.7.—*Oct. 1919 to June 1920 Engr., Pennsylvania Power & Light Co., Allentown, Pa. *TT 0.7: P 0.7: RC 0.7.—*Oct. 1920 to Dec. 1924 Engr., Underwood Contr. Corporation, being Mgr., home and branch office, Supt. of Constr., estimating and purchasing of bank, office, church and library buildings. *TT 4.3: P 4.3: RC 4.3: D 0.5.—*Jan. to Oct. 1925 Engr. with H. E. Riggs, on valuation of Kansas City Rys. Co. *TT 0.8: P 0.8: RC 0.8.—*Nov. 1925 to Feb. 1926 Engr., on valuation and survey work in Ann Arbor, Mich. *TT 0.2: P 0.2: RC 0.2.—*1926 to date Valuation Engr. with Jensen, Bowen and Farrell, Ann Arbor, Mich. *TT 5.2: P 5.2: RC 5.2.—TT 21.9: SP 0.5: P 21.4: RC 15.8: D 1.* Refers to L. E. Ayres, J. H. Cissel, M. E. Cooley, T. L. K. Donnelly, O. A. R. V. Jensen, O. K. Olsen, H. E. Riggs.

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(10) **GARRETT, ROY STUART**, Assoc. M., 120 Catoma St., Montgomery, Ala. (Elected Feb. 25, 1924.) (Age 36. Born Montgomery, Ala.) Sept. 1913 to June 1915 student, Univ. of Alabama. *TT 1: P 1.—*Summer 1914 Transittman, Levelman and Asst., and April to Sept. 1916 and Jan. to July 1917 Chf. Asst. to J. M. Garrett, on highway work, surveys, etc. *TT 0.5: SP 0.5.—*June 1915 to Jan. 1916 Rodman and Recorder, U. S. Survey of Coosa River. *TT 0.2: SP 0.2.—*Jan. to April 1916 Foreman with Abraham Bros., Contrs., on highway construction.—Sept. 1916 to Jan. 1917 Draftsman, U. S. Engr. Office, Montgomery, Ala. *TT 0.2: SP 0.2.—*July to Nov. 1917 Chf. of Field Party with Govt. Engrs., Camp Sheridan, Ala. *TT 0.3: P 0.3: RC 0.3.—*Nov. 1917 to Sept. 1919 Private, 23d Engrs., U. S. Army.—Sept. 1919 to July 1922 Chf. of Party and Res. Engr., Bridge Dept., Garrett & Slack, Project Engrs. *TT 2.7: P 2.7: RC 2.7.—*July 1922 to Jan. 1923 member of firm, J. M. Garrett & Son, Engrs. *TT 0.5: P 0.5: RC 0.5: D 0.5.—*Jan. to April 1923 Draftsman on plans, and Sept. 1923 to July 1924 Res. Engr. on highway and bridges, Alabama State Highway Dept. *TT 1: P 1: RC 1.—*April to Sept. 1923 Chf. of Party, Georgia State Highway Dept., on location. *TT 0.5: P 0.5: RC 0.5: D 0.5.—*July 1924 to Feb. 1925 Res. Engr., Tennessee State Highway Dept., on highway grading and drainage, having charge of surveying crew. *TT 0.6: P 0.6: RC 0.6.—*Feb. 1925 to date Asst. Engr., City of Montgomery; had charge of surveys, plans and design of two large sanitary sewer outfalls (over 9 miles, cost about \$250 000), of grading, drainage, paving walks and driveways and installation of sewers on high-school building and grounds (\$1 000 000), made topographical survey and map of 600-acre municipal airport, etc. *TT 6.4: P 5.4: RC 6.4: D 6.4.—TT 13.9: SP 0.9: P 13: RC 12: D 7.4.* Refers to J. M. Garrett, H. H. Houk, R. D. Jordan, G. N. Mitcham, S. B. Slack, R. L. Totten, H. C. Wells.

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(5) **HACKER, THEODORE WARREN**, Assoc. M., 1602 Baltimore Trust Bldg., Baltimore, Md. (Elected April 7, 1924.) (Age 39. Born New York City.) 1917 C. E., Cornell Univ. *TT 4: P 4.—*June 1917 to March 1918 and April 1919 to Dec. 1925 Res. Engr. with Norton, Bird & Whitman, on sewer and water design, 5 months on sewage-disposal plant construction, 2 months in charge of sewer design at Camp Holabird, 9 months on water-supply installation at Brunswick, Md., and 17 months on sewer design and construction, Macon, Ga. *TT 7.5: P 7.5: RC 6.3: D 4.4.—*April 1918 to March 1919 Asst. Engr., U. S. Naval Operating Base, Hampton Roads, Va., on sewer and building construction; commissioned as Ensign. *TT 1: P 1: RC 0.5: D 0.1.—*Jan. 1926 to date with Whitman, Requardt & Smith, Macon, from April to Dec. 1928 as Res. Engr. on water installation at Williamsport, Md., and remainder of time Associate on water-supply design (6 months), New York-New Jersey water diversion controversy (6 months), sanitary report, Atlanta, Ga. (14 months) and water and

sewer design and construction (since March 1931). *TT 5.7: P 5.7: RC 5.1: D 1.9.—TT 18.2: P 18.2: RC 11.9: D 6.4.* Refers to R. E. Horton, C. E. Kauffmann, H. N. Ogden, W. W. Pagon, T. D. Pitts, R. F. Proctor, G. J. Requardt, E. Stimson, E. B. Whitman.

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(16) HINMAN, JACK JONES, Jr., Assoc. M., 121 Melrose Ave., Iowa City, Iowa. (Elected March 11, 1929.) (Age 42. Born Indianapolis, Ind.) 1911 A. B. and 1915 M. Sc., Butler Univ.—Sept. 1907 to June 1909 student in Chemical Engineering, Purdue Univ. *TT 1: P 1.—*May 1906 to June 1911 (vacations and while student) Asst. Chemist, Indiana State Board of Health, laboratory work, chiefly water examination.—June to Nov. 1911 Chemist, Wabash (Ind.) Baking Powder Co., in charge of manufacturing and testing baking powder mixtures, flavoring extracts, etc.—Nov. 1911 to Feb. 1914 Chemist, City Board of Health and Charities, Indianapolis, Ind., examination of waters, foods, drugs, department supplies, etc.—Feb. 1914 to date with Univ. of Iowa, until 1915 as Asst. Director, State Epidemiological Laboratory; 1915 to 1918 Senior Water Analyst, laboratories of State Board of Health; 1914–1918 also Instructor in water and sewage examination; 1918 to 1921 Asst. Prof. of Epidemiology and Chf., Water Laboratory Div., State Dept. of Health and since 1921 Associate Prof. of Sanitation and Chf., Water Laboratory Div., State Hygienic Laboratories; duties included work of state water and sewage control laboratory, research work on analytical methods, etc., teaching water and sewage examination, operation of water- and sewage-treatment plants and municipal sanitation; assisting State San. Engr. in inspections, emergency-plant operation, etc., and later acting as Advisor; operating treatment of Univ. pools (through student assistants) (2 filter plants capacity 200 000 gal.); supervising quality of Univ. water-supply system (1 000 000-gal. filter plant supplanted well system Jan. 1931); Member, Special Water Comm. of Univ., planning large pool filters and new filter plant under Dept. of Grounds and Bldgs. and Chf., Inspection Div., Univ. Board of Health; since March 1916 in charge of purification, Iowa Water Service Co.; July 1918 to July 1919 (on leave) with U. S. Army as 1st Lieut., later Capt., San. Corps, A. E. F. (water supply); summer 1929 Consultant on water supply re operation new filtration plant, Empresas Publicas Municipales, Barranquilla, Colombia. *TT 17.5: P 17.5: RC 17.5.—TT 18.5: P 18.5: RC 17.5.* Refers to W. A. Bacharach, W. A. Hardenbergh, B. J. Lambert, M. Pirnie, A. V. Ruggles, N. T. Veatch, Jr., C. C. Williams.

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(11) HOLLEY, HAROLD FISKE, Assoc. M., 2601 S. Figueroa St., Los Angeles, Cal. (Elected Junior Aug. 31, 1915; Assoc. M. Sept. 10, 1918.) (Age 40. Born Ocala, Fla.) Registered Civ. Engr., State of California. Feb. 1910 to Feb. 1912 Chairman, Rodman and Transitman, Santa Fe Ry., maintenance of way, yard layouts and valuation. *TT 1: SP 1: D 0.5.—*Feb. 1912 to Feb. 1916 with California Highway Comm., until Aug. 1912 as Transitman, Aug. 1912 to March 1913 Locating Engr., on mountain location in Northern California, March to Aug. 1913 Draftsman on design of road layouts and structures, and after Aug. 1913 Res. Engr. and Constr. Engr., on construction of highways and bridges. *TT 4: P 4: RC 3.5: D 2.—*Feb. to July 1916 in private practice, investigation and reports on highway projects. *TT 0.4: P 0.4: RC 0.4: D 0.4.—*July 1916 to Feb. 1917 Asst. Engr., San Diego & Arizona Ry., on location in Carrizo Gorge, San Diego County. *TT 0.6: P 0.6: RC 0.6: D 0.6.—*Feb. to May 1917 Designing Engr. on private highway project. *TT 0.2: P 0.2: RC 0.2: D 0.2.—*May to Dec. 1917 Locating Engr., Government Railways of Alaska, reconnaissance and location surveys for main line, Anchorage to Fairbanks. *TT 0.6: P 0.6: RC 0.6.—*Dec. 1917 to Feb. 1918 in private practice, report on mining property. *TT 0.2: P 0.2: RC 0.2.—*Feb. 1918 to April 1925 with Dept. of Highways, State of Nevada, until Aug. 1918 as Chf. Draftsman, supervising plans and estimates, Aug. 1918 to Jan. 1919 Dist. Engr.; Jan. 1919 to Jan. 1921 Engr. of Designs, and after Jan. 1921 Engr. of Surveys and Designs, in charge of reconnaissance, surveys, plans, specifications and estimates. *TT 7.2: P 7.2: RC 7.2: D 7.2.—*April 1925 to date Asst. Chf. Engr., Automobile Club of Southern California, on surveys, investigations and research covering motor vehicle economics, taxation, motor transport, highway finance, location and design, city and regional planning, traffic surveys, grade separation design and finance, etc. *TT 6.2: P 6.2: RC 6.2: D 6.2.—TT 20.4: SP 1: P 19.4: RC 18.9: D 17.1.* Refers to R. J. Arey, F. Bates, C. K. Bowen, O. F. Cooley, S. V. Cortelyou, C. C. Cottrell, G. W. Jones.

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(16) HOLT, ANDREW HALL, Assoc. M., 922 South Summit St., Iowa City, Iowa. (Elected Junior Sept. 3, 1913; Assoc. M. June 1, 1920.) (Age 40. Born Sunderland, Vt.) 1912 B. S. in C. E., and 1922 C. E., Univ. of Vt. 1920 M. S., State Univ. of Iowa. *TT 4: P 4.—*Sept. 1912 to May 1917 Instructor in Civ. Eng., until June 1914 at Univ. of Vermont, and after Sept. 1914 at Coll. of Applied Science, State Univ. of Iowa; summers 1912–1914 Instrumentman and Field and Office Engr. with F. O. Sinclair, Cons. Engr., Burlington, Vt.,

general surveying and engineering, bridge design for towns, etc., summer 1916 Draftsman and Computer, American Bridge Co., Gary, Ind., detailing and checking computations on bridges, designing details. *TT 4.8: P 4.8: RC 0.6: D 0.3.*—May 1917 to Aug. 1919 with U. S. Army, as Candidate in First Engr. Officers' Training Camp, 1st Lieut. and Capt., Engrs., being Instructor in 2d Training Camp, Presidio of San Francisco, Cal., Personnel Officer, Office of Director-Gen. of Military Rys., Office of Chf. of Engrs., Personnel Adjt., 605th Engrs. and Head of Dept. of Civ. Eng., A. E. F. Univ., Beaune, France. *TT 2.3: P 2.3.*—Sept. 1919 to 1921 Asst. Prof., and 1921 to date Associate Prof., of Civ. Eng., State Univ. of Iowa; summers in private practice of civil engineering and surveying, on work for Univ. of Iowa, for Dist Engr., U. S. Engr. Office, Rock Island, Ill., Iowa Ry. & Light Corporation, etc. *TT 10.8: P 10.8: RC 8.8: D 0.6.*—*TT 21.9: P 21.9: RC 9.4: D 0.9.* Refers to B. P. Fleming, C. L. Hall, R. B. Kittredge, B. J. Lambert, F. A. Nagler, G. R. B. Symonds, M. C. Tyler, E. L. Waterman, C. C. Williams, S. M. Woodward, D. L. Yarnell.

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(6) JEMISON, LAWRENCE LEE, Assoc. M., 21 Curry St., South Charleston, W. Va. (Elected April 3, 1922.) (Age 44. Born Middlebourne, W. Va.) 1914 B. S. C. E., W. Va. Univ. *TT 4: P 4.*—Summers 1909 to 1913 Asst. to P. P. Berkley, Middlebourne, W. Va., acting as Rodman, Transmitter and Inspector on municipal and county work.—July to Sept. 1914 Draftsman, American Bridge Co., Pittsburgh, Pa., shop drawings for mills, buildings and bridges. *TT 0.2: P 0.2.*—Oct. 1914 to March 1917 with West Virginia State Road Bureau, until Sept. 1915 as Bridge Draftsman, then Bridge Inspector, and after Dec. 1915 drafting, designing and inspecting highway bridges. *TT 2.5: P 2.5: D 0.9.*—March to June 1917 Asst. Engr. on road construction, Mineral County, W. Va. *TT 0.3: P 0.3.*—June 1917 to date with West Virginia State Road Comm., until April 1919 as Asst. Bridge Engr., and since then Bridge Engr., in responsible charge of designs, estimates and detailing of bridges, also general supervision of construction and inspection (approx. \$1 000 000 annually). *TT 13.9: P 13.9: RC 13.7: D 10.7.*—*TT 20.9: P 20.9: RC 13.7: D 11.6.* Refers to R. P. Davis, W. S. Downs, C. P. Fortney, G. H. Hill, E. G. Middleton, H. E. Snyder, H. J. Spelman.

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(1) KELCEY, GEORGE GUY, Assoc. M., 844 Cross Ave., Elizabeth, N. J. (Elected Dec. 14, 1925.) (Age 42. Born Dunchurch, Ont., Canada.) 1914 B. S. M. E., Carnegie Inst. Tech. *TT 4: P 4.*—1907 to 1908 Chainman, Instrumentman and in charge of field party, City Engr.'s office, Lackawanna (West Seneca), N. Y., on installation of sewer and sewage-disposal plant and municipal surveying. *TT 0.5: SP 0.5.*—1914 to 1917 Asst. and Acting Mgr., Mortgage Dept., Peoples Savings & Trust Co., Pittsburgh; bond sales and Acting Mgr. of Pittsburgh Branch, Financial Dept., E. W. Clark & Co., Public Utility Operators and Financiers.—1917 to 1919 Bombing Pilot and Engr. Pilot, U. S. Army Air Service. *TT 1.2: SP 0.6: P 0.6: RC 0.4.*—1919 to 1920 with Rush Machinery Co., Pittsburgh, engineering and industrial applications and development, gas welding and cutting, electric arc, butt, spot and seam welding, some work with turbines, boilers, power blowers and exhaust equipment. *TT 1.5: P 1.5.*—1920 to date Mgr., Traffic Eng. Div., American Gas Accumulator Co., Elizabeth, N. J., on development and application of signals for regulation and control of city and highway traffic and for marine and aviation purposes; organization, training and management of engineers and salesmen on city, county and highway traffic work, traffic surveys, studies and consultation in cities and counties and on state highways. *TT 11: P 11: RC 11: D 11.*—*TT 18.2: SP 1.1: P 17.1: RC 11.4: D 11.* Refers to J. L. Bauer, S. Eckels, E. P. Goodrich, E. W. James, W. E. Mott, P. D. Sargent, C. M. Upham.

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(11) LABARRE, ROBERT V, Assoc. M., 1151 South Broadway, Los Angeles, Cal. (Elected Aug. 9, 1920.) (Age 57. Born Gretna, La.) 1895 to 1898 Rodman and Draftsman (1½ years) and Asst. Engr. (1½ years). Orleans Levee Board, and Topographer with survey party, U. S. Engr. Office, New Orleans, La. (5 months). *TT 2.1: SP 0.3: P 1.3.*—1899 Constr. Engr., Lake End Cotton Oil Mills. *TT 1: P 1: RC 1.*—1900 to 1909 Designer and Supt., J. L. Means Machinery Co., Shreveport, La., on machinery design and electrical specialties. *TT 9: P 9: RC 9: D 9.*—1910 to 1912 with Fred A. Jones Bldg. Co., Houston, Tex., 4 months as Engr. on design of concrete apartments, then Supt., successively on Bender Hotel, Telephone Bldg., and Office Bldg., Birmingham, Ala. *TT 2.2: P 2.2: RC 1.9: D 1.3.*—1912 to 1914 with Realty Constr. Co., Birmingham, as Mgr. and Supt., office building, Atlanta, Ga. *TT 1.2: P 1.2: RC 1.2.*—1914 to 1918 and 1919 to 1920 Engr. and Contr., building warehouses, industrial buildings and refrigerating plants in Alabama, Georgia and Florida, and (after 1919) on bridge building in Georgia. *TT 4.5: P 4.5: RC 4.5.*—1918 to 1919 Capt. of Engrs., U. S. Army, Co. F, 606th Engrs., Co. B, 211th Engrs., Headquarters Div., Camp Humphreys, Va., in charge of design and construction of proposed new post and

college of military research. *TT 0.4: SP 0.4: D 0.3.*—1920 with The Foundation Co., about 3 months as Mgr., Detroit office, then Engr. in charge of sanitation of Paita, Peru, and on work for Vanadium Corporation, Peru. *TT 1: P 1: RC 1: D 0.7.*—1921 to 1922 Engr. and Gen. Mgr., Realty Constr. Co., Flint, Mich., on foundations and industrial buildings. *TT 2: P 2: RC 2: D 0.6.*—1923 to 1927 Engr. in charge of construction of foundations and underpinning, Bullock's store and warehouse, Subway Terminal, Bower, Southern California Edison Co. and Stock Exchange Bldgs. and Belasco Theatre, all in Los Angeles, Cal. *TT 3.9: P 3.9: RC 3.9: D 1.*—1927 Engr.-in-Chg., on construction of Sutherland dam, San Diego, Cal. *TT 0.9: P 0.9: RC 0.9: D 0.6.*—1928 to date Cons. Engr., Los Angeles, on foundation and underpinning and foundation investigations. *TT 2.6: P 2.6: RC 2.6: D 2.6.*—*TT 30.8: SP 1.2: P 29.6: RC 28: D 16.1.* Refers to R. M. Beanfield, O. G. Bowen, H. W. Dennis, H. L. Doolittle, O. Dunkel, R. R. Martel, A. F. J. Miller, R. V. Orbison, C. L. Peck, F. Thomas.

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(16) **LEARNED, CLYDE EMERSON**, Assoc. M., 988 South Williams St., Denver, Colo. (Elected April 7, 1915.) (Age 45. Born Worcester, Mass.) 1909 B. S. in Civ. Eng., Worcester Pol. Inst. *TT 4: P 4.*—Summers 1907 to 1909 Instrumentman, City Engr.'s Office, Worcester, Mass., on highway construction.—1909 to 1910 Draftsman, New York Central R. R. *TT 0.5: SP 0.5.*—1910 to 1914 Rodman, Levelman and Asst. Engr., Oswego Div., New York State Barge Canal. *TT 3.7: SP 0.5: P 3.2: RC 2.2.*—1915 to 1918 Engr. and Supt. of Constr. with Henry P. Burgard, Buffalo, N. Y., Contr. on barge canal and highway construction, designing contractor's concrete plant layouts and form work, crushing plant set ups, etc. *TT 3.3: P 3.3: RC 3.3: D 1.*—1918 to date Associate and Highway Engr., U. S. Bureau of Public Roads, until July 1918 in Washington office checking Federal Aid plans; July 1918 to June 1919 on Federal Aid inspection, Denver Office; July 1919 to April 1929 Engr. and Supt. in charge on construction of Monarch and Binthoud Passes and maintenance of Colorado forest highway projects and Engr. on a number of contract constructed projects in Colorado; May 1929 to date Asst. to Dist. Engr., in charge of forest highway and national park construction in Dist. No. 3 (Colorado, Wyoming, New Mexico and Black Hills of South Dakota); also designed drainage structures, mountain road standards, equipment, concrete plant and camp layouts, etc. *TT 13: P 13: RC 12: D 3.*—*TT 24.5: SP 1: P 23.5: RC 17.5: D 4.* Refers to H. K. Bishop, J. S. Bright, J. L. Brownlee, L. I. Hewes, E. W. James, A. E. Palen.

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(1) **LENT, RICHARD PERKINS**, Assoc. M., P. O. Box 309, Babylon, N. Y. (Elected May 28, 1923.) (Age 40. Born Highland, N. Y.) 1913 B. E., Union Coll. *TT 4: P 4.*—June to Nov. 1913 Inspector, until Aug. with James F. Loughran, Kingston, N. Y., then with City of Schenectady, N. Y., inspecting construction details of curb, street paving, sewer construction, etc. *TT 0.5: P 0.5.*—Nov. 1913 to April 1914 Instrumentman for C. M. Christian, Poughkeepsie, N. Y., figuring estimates, setting grades, pile design and general construction. *TT 0.4: P 0.4.*—April 1914 to Sept. 1917 and Aug. 1919 to June 1922 with New York State Highway Comm., one year as Rodman, setting grades, estimates and inspecting road construction, then Jun. Asst. Engr., in charge of construction of road work, and after Aug. 1919 Asst. Engr., in charge of construction and design of pavements. *TT 5.7: SP 0.5: P 5.2: RC 5.2: D 1.2.*—Sept. 1917 to July 1919 with U. S. Army, one year as 2d Lieut., then 1st Lieut., Engrs., about 1 year commanding company, operation of saw-mill. *TT 1.8: P 1.8: RC 1.8.*—June 1922 to Sept. 1924 Res. Engr. with R. D. Gladding, Boston, Mass., in responsible charge of municipal construction (\$700 000) at Oxford, Henderson and Wilson. *TT 2.3: P 2.3: RC 2.3: D 0.6.*—Sept. 1924 to Sept. 1925 Field Engr., Portland Cement Association, Chicago, Ill., acting as Consultant for City Mgrs., Archts. and Engrs., in design of concrete and development of its uses. *TT 1: P 1: RC 1: D 0.4.*—Sept. 1925 to June 1927 Vice-Pres., Gladding Eng. Co., Wilton, N. C., in charge of surveys and construction, including expenditures of cities of Wilton, Selma, Bailey and Southport, N. C. *TT 1.8: P 1.8: RC 1.8: D 0.6.*—June to Dec. 1927 Supt. of Constr. with Lowell Grossman, Poughkeepsie, N. Y., on concrete road in village of Peekskill. *TT 0.5: P 0.5: RC 0.5.*—June 1928 to July 1929 Inspector of Constr. and Asst. Engr., Westchester County Highway Comm., in charge of design of highways, computed estimates for and inspected road construction. *TT 1.1: P 1.1: RC 1.1: D 0.3.*—July 1929 to Jan. 1930 Inspector of Constr., New York Board of Water Supply, in charge at Shaft No. 2 A, Yonkers, N. Y. *TT 0.5: P 0.5: RC 0.5.*—Jan. 1930 to date Asst. Engr., Long Island State Park Comm., in charge of location for Northern State Parkway, also Engr.-in-Chg. of construction at Jones Beach State Park including highway, boardwalk, sea-wall, bath-house and water supply (over \$1 000 000); at present Superv. Engr. in charge of testing and pavement construction. *TT 1.5: P 1.5: RC 1.5: D 0.3.*—*TT 21.1: SP 0.5: P 20.6: RC 15.7: D 3.9.* Refers to L. R. Ames, T. A. Avery, W. A. Hardenbergh, A. E. Howland, D. D. Thomson, C. M. Upham, B. H. Wait.

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(15) **McFADDEN, GAYLE**, Assoc. M., P. O. Box 633, Childress, Tex. (Elected May 8, 1922.) (Age 38. Born Jacksonville, Fla.) Registered Engr., State of Florida.—Sept. 1911 to Jan. 1914 Student, Alabama Polytechnic Inst. TT 1: P 1.—June 1909 to Jan. 1910 Rodman and Chainman, Board of Bond Trustees, Jacksonville, Fla., on construction of sewers and drains. TT 0.2: SP 0.2.—Jan. 1910 to Sept. 1911 Rodman, Chainman, Transitman and Asst. Engr. on establishment of street lines and sidewalk grades, construction of paved streets, and summer 1912 and Jan. 1914 to Jan. 1916 Transitman on construction of sewers, drains, pavements, etc., Jacksonville Eng. Dept. TT 1.8: SP 1.8.—Summer 1913 Prin. Asst. to County Engr., Duval County, Fla., on construction of brick and shell highways.—Jan. to Nov. 1916 Draftsman and Asst. Engr., Valuation Dept., Florida East Coast Ry., preparing and computing roadway and track maps for Interstate Commerce Comm. and investigating fills, F. E. C. Ry. extension. TT 0.9: P 0.9: RC 0.9.—Nov. 1916 to May 1917 Field Draftsman, Isham Randolph Co., maps and computations on preliminary surveys of Upper St. Johns Drainage Dist., Fla. TT 0.5: P 0.5: RC 0.5.—May 1917 to March 1920 2d and 1st Lieut., U. S. Army.—March 1920 to July 1927 member of firm, Carr & McFadden, Inc., Civ. Engrs., West Palm Beach, Fla., consulting work, involving design and construction of municipal improvements, city and townsite planning; designed and supervised construction of sewers, disposal plants, water systems, including pumping units; lighting systems for additions to City of West Palm Beach, Homestead, Vero, Stuart and other cities and towns in Florida, sewer system and disposal for West Palm Beach, complete layout of Olympia, Fla., including all utilities, reclamation of submerged lands involving construction of sea walls and hydraulic dredging, reclamation projects in and around Palm Beach, etc. TT 7.4: P 7.4: RC 7.4: D 7.4.—July 1927 to July 1928 Div. Engr., Devlin Eng. Co., Wichita, Kans., and Amarillo, Tex.; supervised preliminary surveys, design and construction of municipal improvements in towns in West Texas, including sewer system and disposal plant at Miami, Tex., filtration plant and complete water system at Longton, Kans., municipal water-softening plant, water-distribution system, sewer system and disposal plant at Big Lake, Tex., and street paving at Pecos and Odessa, Tex. TT 1: P 1: RC 1: D 1.—July 1928 to date Pres., McFadden Eng. Co., Inc., Cons. Civ. Engrs.; designed and supervised construction of municipal improvements, including complete water system, pumping units and storage at Follett, Tex., development of water supply and construction of cross-country supply line with wells, pumping units and storage at Turkey, Tex.; sewer system and disposal plant at Goree, Tex.; development of water supply and construction of supply lines, 1 000 000-gal. concrete reservoir, redesign of main pumping plant and installation of booster pumps, etc., and street paving in Childress; past 2 years Cons. Engr. to City of Childress. TT 3: P 3: RC 3: D 3.—TT 15.8: SP 2: P 13.8: RC 12.8: D 11.4. Refers to S. D. Bacon, G. A. Hanson, A. F. Harley, G. B. Hills, O. Randolph, W. E. Sheddian.

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(1) **McPHAIL, DONALD STUART**, Assoc. M., Jogindar Nagar, Manda State, Punjab, India. (Elected Sept. 10, 1923.) (Age 38. Born Tulloch, Jamaica.) 1920 B. Sc. in Civ. Eng., McGill Univ. TT 4: P 4.—Summer 1914 Asst., Canada Geological Survey, Topographical Sec.—April to Nov. 1915 Second Lieut., Royal Garrison Artillery (British), Plymouth, England, gunnery school and coast defense fort, and Nov. 1915 to June 1919 with Royal Engrs. (British) finally as Capt.; took course at School of Mil. Eng., Chatham, England, then with Expeditionary Force, France and Belgium. TT 3.6: P 3.6: RC 2.—May to Dec. 1920 Asst. Engr. with Fraser, Brace, Ltd., on construction of hydro-electric power plant (4 500 h. p.), and canal (approx. 600 ft. long), laying out and checking work, estimating quantities, etc. TT 0.6: P 0.6.—July 1921 to Jan. 1922 Senior Asst., Jamaica Govt. Ry., on reconnaissance and preliminary surveys for 18-mile extension. TT 0.5: P 0.5.—May 1922 to Aug. 1923 Asst. Engr., United Fruit Co., Guatemala Div., on railway construction, drainage, surveys, foundations for wireless plant (400-ft. towers, etc.). TT 1.2: P 1.2.—1923 (about 2 months) with Jamaica Public Service Co., Ltd., in charge of topographical survey for reconstruction of dam, checking and revising measurements on plans of steam plant for new installation. TT 0.2: P 0.2: RC 0.2.—March 1924 to July 1925 with W. G. Armstrong Whitworth & Co., Ltd., London, England, until June 1924 on estimates, then Asst. Engr. on Humber Development Scheme in Newfoundland, supervising and laying out conveyors; substation, slasher mill, boiler room, wood room, etc., of paper mill (100 000 h. p.). TT 1.3: P 1.3: RC 1.1.—Feb. 1926 to date with Public Works Dept., Punjab, India, until Sept. 1927 as Executive Engr. in charge of Hydr. Project Div. of Uhl River Hydro Elec. Scheme, Punjab, India, and since Sept. 1927 Res. Engr. in charge of surveys, river gauging, layout of center lines and levels for buildings, head-works, tunnel (3 miles), pipe line, power house, etc.; in

charge of cement and concrete testing laboratories, liaison between Design and Constr. Depts., including carrying out field designs on first stage of scheme, 3-mile tunnel (1800 ft. head, three 12 000 kw. sets and one spare set). *TT 5.5: P 5.5: RC 5.5: D 5.5.—TT 17: P 17: RC 8.8: D 5.5.* Refers to B. C. Battye, J. H. Brace, H. C. Lott. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(5) **MORTON, PAUL STEELE**, Assoc. M., Petersburg, Va. (Elected March 5, 1928.) (Age 36. Born Louisville, Ky.) June 1913 to June 1914 Rodman, Instrumentman and Inspector, Louisville & Nashville R. R. *TT 0.5: SP 0.5.—*June 1914 to June 1915 Rodman and Instrumentman, Southern Ry. *TT 0.5: SP 0.5.—*June 1915 to June 1916 Instrumentman and Asst. Res. Engr., and Jan. 1922 to Jan. 1923 Asst. Engr. on valuation, Chesapeake & Ohio Ry. *TT 1.5: SP 0.5: P 1: RC 1.—*June 1916 to June 1917 Res. Engr. and Constr. Supt., Virginia Lead & Zinc Corporation. *TT 1: P 1: RC 1.—*June 1917 to April 1919 Private, Sergeant and Graduate, Engr. Officers' School, U. S. Army, 17th Engrs., A. E. F.; had charge of railroad surveys and construction of railroads at Savanay and St. Nazaire, Base Hospital No. 8, at Savanay, etc. *TT 1.8: P 1.8: RC 1.8.—*April 1919 to Jan. 1921 Res. Engr. and Archt.'s Inspector, Jacksonville Terminal Co., being in charge of contract (\$1 000 000) work on terminal building, staking out yards, subway, underground works, designed sanitary and storm-water sewer system, etc. *TT 1.6: P 1.6: RC 1.6.—*Jan. 1921 to Jan. 1922 Res. Engr. and Asst. Div. Engr., Virginia Highway Comm., in charge of contract work in eleven countries, including considerable design. *TT 1: P 1: RC 1.—*Jan. 1923 to July 1925 Director of Public Safety, and July 1925 to July 1929 City Mgr., Alexandria, Va., in charge of all municipal design and construction, including renovation and reconstruction of municipal gas plant. *TT 4.5: P 4.5: RC 4.5.—*July 1929 to date City Mgr., Petersburg, Va., duties have included supervising engineering work and design, including reconstruction and renovation of municipal water-works, bridge problems, including failure of highway bridge (\$1 000 000) across a river, replacement of structural steel viaduct by a fill, and designing triple reinforced concrete culvert under it, also designed streets, sewers, water-mains, highway and sidewalk construction. *TT 2: P 2: RC 2.—TT 14.4: SP 1.5: P 12.9: RC 12.9.* Refers to E. C. Dunn, R. W. B. Hart, E. M. Hastings, A. J. Saville, W. A. Young.

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(11) **PHILLIPS, JAMES EMERSON**, Assoc. M., 207 South Broadway, Los Angeles, Cal. (Elected March 16, 1925.) (Age 48. Born Russellville, Ind.) 2½ years student, Civ. Eng. course, Rose Polytechnic Inst. *TT 1: P 1.—*March to Aug. 1905 Rodman, Chicago & Eastern Illinois R. R. *TT 0.2: SP 0.2.—*July 1906 to March 1907 with Chicago & North Western R. R. as Rodman and Instrumentman, on surveys, drafting, computing, Inspector on pile trestle and wood truss bridges, in South Dakota. *TT 0.4: SP 0.4.—*April to Sept. 1907 in charge of topographic survey of a country estate near Cleveland, Ohio. *TT 0.5: P 0.5: RC 0.5.—*1908 and May 1911 to May 1912 in private practice successively at Rockville, Ind., and Portland, Ore., surveys, subdivision, highway and mining engineering. *TT 2: P 2: RC 2.—*1909-1910 County Surveyor, Parke County, Rockville, Ind., surveys, design, plans and specifications for and superintending construction of 40 miles of highway and reinforced concrete bridges up to 75-ft. span. *TT 2: P 2: RC 2: D 2.—*June 1912 to date Draftsman, Asst. Engr. and Engr., Los Angeles City Water Dept., design, estimates and surveys on location and construction of major water-supply lines and distributing systems, including pipe lines, conduits, tunnels, flumes, gate towers, steel tanks, etc.; field hydrography, reports and studies on available water supply, well development in Owens Valley, 6 years in responsible charge of department drafting room, including design; experimental research on flow of water through gravel under pressure, appraisals of private water systems; expert witness in courts and before California State R. R. Comm. on construction, design, operation and valuation of water-works systems; past 4 years Engr. in charge of maintenance and operation of Los Angeles aqueduct and affiliated activities in Owens Valley, including drilling wells and operating approx. 100 wells, increasing capacity of aqueduct from 400 to 470 sec.-ft., being responsible for maintaining adequate supply for city; at various times also Cons. Engr. to other municipalities and private concerns on water-works engineering matters and appraisals, including engagement as Engr. for City of Fresno, Cal., on appraisal for condemnation of \$2 500 000 water-works system. *TT 16.2: SP 3: P 13.2: RC 13: D 6.—TT 22.3: SP 3.6: P 18.7: RC 17.5: D 8.* Refers to W. W. Hurlbut, J. B. Lippincott, W. Mulholland, D. L. Reaburn, C. A. Smith, A. L. Sonderegger, H. A. Van Norman.

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(15) **ROCKETT, LOUIS CHARLES**, Assoc. M., Santa Fe, N. Mex. (Elected June 16, 1924.) (Age 42. Born Chicago, Ill.) 1915 B. S. in C. E., Univ. of Wis. *TT 4: P 4.—*May 1915 to Nov. 1917 Rodman, Transitman, Draftsman, Computer and Estimator, Madison (Wis.) Div., Chicago & Northwestern Ry. *TT 1.2: SP 1.2.—*Nov. 1917 to June 1918 and Jan. 1919

to July 1922 with Wisconsin Highway Comm., Div. No. 5, LaCrosse, Wis., on field surveys, drafting, designing, computing and estimating, later Res. Engr. on Federal Aid construction and finally Asst. Div. Engr. *TT 3.5: SP 0.5: P 3: RC 0.8: D 1.5.*—July 1922 to date Engr., U. S. Bureau of Public Roads, Santa Fe, N. Mex., field and office supervision of plans, specifications, estimates, construction, etc., in administration of Federal Highway Act. *TT 9: P 9: RC 9.—TT 17.7: SP 1.7: P 16: RC 9.8: D 1.5.* Refers to L. F. Copeland, J. C. Harvey, L. I. Hewes, G. L. McLane, C. G. Morrison, A. E. Palen, A. O. Peabody.

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(9) ROSS, MARION DRAKE, Assoc. M., 712 Coppin Bldg., Covington, Ky. (Elected June 4, 1928.) (Age 47. Born Lexington, Ky.) 1904 to 1906 Rodman, Cincinnati Southern Ry. *TT 1.2: SP 1.2.*—1906 to 1910 Leveler and Instrumentman, and 1910 to 1912 Asst. Engr. Lexington & Eastern R. R., on location, construction and maintenance. *TT 4: SP 2: P 2: RC 2: D 1.*—1912 to 1915 Asst. Engr., Dept. of Public Roads, Kentucky, on highway location and construction. *TT 3: P 3: RC 3: D 3.*—1915 to date Dist. Engr., Kentucky Highway Dept., on construction, reconstruction and maintenance of roads and bridges (expenditure in 1930 approx. \$2 000 000), in responsible charge, including field design, etc. *TT 15: P 15: RC 15: D 15.—TT 23.2: SP 3.2: P 20: RC 20: D 19.* Refers to A. G. Briggs, W. L. Glazier, C. W. Lovell, J. T. Madison, D. V. Terrell, E. N. Todd, J. S. Watkins.

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(1) SCHUYLER, WALTER WESLEY, Assoc. M., Preston, Oriente, Cuba. (Elected Junior May 6, 1914; Assoc. M. Nov. 25, 1919.) (Age 42. Born Mansfield, Ill.) 1911 B. S. in C. E., and 1916 C. E., Purdue Univ. *TT 4: P 4.*—Summer 1910 Rodman, Oil Belt Ry., Oblong, Ill.—June to Sept. 1911 Transitman with City Engr. of Oblong; Sept. 1911 to June 1912 Chainman and Rodman, Illinois Central R. R. *TT 0.6: SP 0.6.*—June 1912 to June 1915 Asst. Engr., Changuinola R. R., Bocas del Toro, Panama, located about 20 miles of railroad and was responsible to Chf. Engr. for construction; in charge of construction of five steel bridges (\$175 000). *TT 3: P 3: RC 3: D 3.*—June 1915 to date with United Fruit Co., as follows: June to Nov. 1915 Prin. Asst. Engr., Panama Div., responsible for field and office work on steel bridges and construction; Dec. 1915–Dec. 1924 with Preston (Cuba) Div. until Oct. 1919 as Acting Chf. Engr. in charge of engineering; Oct. 1916–Oct. 1919 Chf. Engr., responsible for location and construction of 40 miles of railroad, including four steel bridges (\$1 280 000), dock and wharf (\$125 000) and water service (\$222 000) construction, sewerage system and municipal work (\$25 000), surveys and cane development (\$125 000), in charge of maintenance of 74 miles of pipe lines and 7 dams; during 1918 and 1919 made plans, estimates and was responsible (until transferred to Agricultural Dept.) for railroad construction (\$1 341 000), water lines, dams, etc. (\$700 000); Nov. 1919 to March 1924 Supt. of Agriculture, responsible for maintenance and upkeep of over 50 000 acres of cane, harvesting and delivering 750 000 to 1 000 000 tons, road repairs and farm bridge construction and had direct supervision of agricultural organization; March to June 1924 Acting Mgr., responsible to Vice-Pres., and June–Dec. 1924 Mgr., responsible for maintenance and betterment work on reservoirs, sewerage system, pipe lines, railroad (182 miles), construction and repairs to buildings, wharves, water tanks, surveys and supervision over three-tandem raw sugar factory, etc.; Jan. 1925 to May 1927 Mgr., and since May 1927 Gen. Mgr., Cuban Divs. (including Preston, Banes and Havana Divs.), responsible for administration and operation of all properties in Cuba, including supervision of over 280 000 acres of land, 340 miles of railroad, maintenance and upkeep of 4 000 steel, concrete and wooden buildings, 335 miles of pipe line, two large raw sugar factories (grinding 18 000 tons of cane daily), etc.; since Jan. 1925 also responsible for new construction and installation of new equipment (approx. \$5 000 000). *TT 16.1: P 16.1: RC 16.1: D 4.4.—TT 23.7: SP 0.6: P 23.1: RC 19.1: D 7.4.* Refers to W. K. Hatt, C. MacCallum, H. Parker, A. G. Robertson, A. C. Stanfield.

916

(1) SEXTON, CLARENCE WILLIAM NEWSOME, Assoc. M., 79 St. Helens Rd., Hawthorn East E3, Victoria, Australia. (Elected Oct. 12, 1925.) (Age 40. Born Melbourne, Victoria, Australia.) Received certificates of qualification as Engr. of Water Supply and as Municipal Engr., Victoria. 1913 B. C. E., and 1921 M. C. E., Univ. of Melbourne. *TT 4: P 4.*—Jan. to March 1911 Chainman, Instrumentman and Computer, Dept. of Home Affairs, Melbourne, Australia.—Jan. to March 1912 Gen. Asst., Constr. Branch, Victorian Rys., in camp office and in field setting out work.—March 1913 to Feb. 1915 Draftsman and Asst. Engr., Reinforced Concrete Co., Melbourne, on design calculations, quantities, estimates or drawings for reinforced concrete structures. *TT 1.7: SP 0.1: P 1.6: RC 1: D 1.*—March 1915 to Feb. 1916 Draftsman, Way and Works Branch, Victorian Rys., on design, calculations, drawings, quantities or estimates of steel railway and road bridges, etc. *TT 0.6: SP 0.3: P 0.3: RC 0.1: D 0.1.*—Feb. 1916 to Feb. 1920 (except April to Aug. 1919 Draftsman, Designer and Estimator, Dorman, Long & Co., Ltd., England, on mill buildings and other steel structures) with

Field Engrs., Australian Expeditionary Force, as Sapper, N. C. O. (3 months) and Lieut. (3½ years) on construction of abutments, temporary bridges, roads, etc., mainly in France and Belgium. *TT 2.1: SP 0.3: P 1.8: RC 0.5.*—March 1920 to date with Univ. of Melbourne, until March 1922 as Asst. Lecturer in Civ. Eng., then Lecturer in charge (under Senior Lecturer) of hydraulic laboratory, some lecture courses, design and drawing office work in civil and hydraulic engineering, and since March 1925 Senior Lecturer, in complete charge of Civ. and Hydr. Eng. Dept., including lectures, designs and drawing office work and hydraulic and road materials testing laboratories; also 1920 to 1930 in consulting practice and on investigations, including design, plans and specifications for factory building; supervising and checking design of Barwon River Bridge; checking and approval of computations of reinforced concrete buildings for Hawthorn Municipal Council (1920-25); on investigations and reports on collapse of 7-story reinforced concrete building in Melbourne and of concrete tunnel, Bete Bolong Flood Protection Scheme, Victoria, and on structural defects in a 7-story reinforced concrete building in Melbourne; Supervisor of Constr. of suspension footbridge in Coburg, various tests and investigations, particularly on centrifugal pumps and road materials for public utilities and companies; 1925 to 1930 Member of Municipal Surveyors Board of Victoria, of Victorian State Sub-committee on Roadmaking Materials and sectional committees for drafting and issue of standard specifications on reinforced concrete structures, pipes and concrete, Australian Standards Association, of Victorian Advisory Committee of Institution of Civil Engineers, and of various University and Technical College Boards and Committees. *TT 11.3: P 11.3: RC 11.3: D 7.8.*—*TT 19.7: SP 0.7: P 19: RC 12.9: D 8.9.* Refers to G. Higgins, C. H. Kernot, M. E. Kernot, B. A. Smith, I. M. Sutherland, T. H. Upton.

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(10) SEYMOUR, EDWIN NEWBURGER, Assoc. M., 2 Capital Sq., Atlanta, Ga. (Elected Junior June 16, 1919; Assoc. M. Oct. 11, 1920.) (Age 37. Born Coffeeville, Miss.) 1913 B. E., and 1920 C. E., Univ. of Miss. *TT 4: P 4.*—Summer 1911 Levelman and Asst. on highway surveys in Yojobusha County, Miss.—Summer 1913 Asst. Engr. on design and plans for street paving in Clarksdale, Miss. (1 month) and Instrumentman on drainage survey in Sharkey and Issaquena Counties, Miss. *TT 0.1: SP 0.1.*—Sept. 1913 to March 1914 private work, surveys, estimates for contractors, etc. *TT 0.3: SP 0.3.*—March 1914 to April 1915 Asst. Engr., Dabney Eng. Co., in charge of construction of water-works and sewerage at Summer, Miss., water-works plant at Batesville, Miss., and Inspector on water-works plant at Vicksburg, Miss. *TT 0.8: SP 0.2: P 0.6: RC 0.6.*—June 1915 to April 1918 with Cotton Belt Levee Dist. No. 1, Helena, Ark., until Sept. 1915 as Inspector, then Asst. Engr. in charge of construction (under Chf. Engr.) and after Dec. 1916 Chf. Engr. in full charge of design, construction and acceptance of work. *TT 2.9: P 2.9: RC 1.4.*—May 1918 to July 1919 with Engr. Corps, U. S. Army, on topographic work, sewerage and camp construction in United States and camp drainage and road building in France. *TT 1.1: P 1.1.*—July 1919 to March 1924 with Southern Eng. Co., Clarksdale, Miss., after Jan. 1920 as member of firm; had charge of design and construction of sewer system for Lambert, Miss., and of various highway and drainage projects. *TT 4.7: P 4.7: RC 4.7: D 4.7.*—March 1924 to date with State Highway Dept. of Georgia, until March 1927 as Asst. Office Engr., then Asst. Engr. in general charge of construction in six divisions, and since March 1930 Office Engr. in charge of roadway plans and design, securing rights of way, preparing estimates, contracts and specifications, contractors' and Federal Aid statements, etc. *TT 7.3: P 7.3: RC 7.3: D 4.1.*—*TT 21.2: SP 0.6: P 20.6: RC 14: D 8.8.* Refers to Q. C. Ayres, J. W. Barnett, C. R. Hopper, J. H. Johnston, L. W. Mashburn, W. R. Neel, C. L. Rhodes, W. J. Shackelford, S. B. Slack, C. H. West, C. W. Wright, S. R. Young.

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(11) SHAW, CLARK HERVEY, Assoc. M., 236 East Tenth St., Long Beach, Cal. (Elected June 3, 1915.) (Age 49. Born Mansfield, Ohio.) March 1901 to 1902 Chairman, Rodman and Instrumentman with Hervey E. Shaw, C. E., Long Beach, Cal., on irrigation, mining, industrial and municipal engineering, and Instrumentman with W. A. Foster, C. E., Long Beach, on drainage, harbors, municipal improvements, highways, sewerage and foundations, irrigation work; 1902 to 1903 with J. B. Lippincott, C. E., on subdivision work, water-works construction and structural work in and around Southern California; 1903 to 1904 Instrumentman with M. L. Cook, San Bernardino, Cal., on railroad construction and some underground work in mine. *TT 1.5: SP 1.5.*—Jan. 1908 to Aug. 1910 in private practice, designing and constructing irrigation works, drainage, water supply, harbors, etc., in and around Southern California and Mexico. *TT 2.6: P 2.6: RC 2.6: D 2.6.*—Feb. 1904 to Jan. 1908 and Aug. 1910 to date with City of Long Beach, until April 1906 as Surveyor in charge of street paving and subdivision work; April 1906 to Jan. 1908 Asst. City Engr. in charge of plans, designs, field parties on street paving, sidewalk and curb construction, etc.; Aug. 1910

to Sept. 1911 Special Draftsman, City Engr.'s office, on research work, assisting in design of sewers, representing city in special street openings and on flood-control matters; since Sept. 1911 in charge of Water Dept., 33/10 years as Hydr. Engr. designing distribution system, pump lines, reservoirs, etc., and since 1914 Chf. Engr. in responsible charge of engineering, including design, construction, etc., for development of Dept. TT 24.7: P 24.7: RC 24.7: D 22.5.—TT 28.8: SP 1.5: P 27.3: RC 27.3: D 25.1. Refers to E. R. Bowen, J. B. Lipplincott, H. Z. Osborne, R. J. Reed, A. L. Sonderegger.

919

(10) SMEDBERG, CARL WALDEMAR, Assoc. M., 315 Woodbine Court, Greensboro, N. C. (Elected Oct. 10, 1921.) (Age 38. Born Ishpeming, Mich.) 1915 B. C. E., Univ. of Mich. TT 4: P 4.—June 1911 to June 1915 (while student) Asst. in Surveying Dept., and summer 1915 Teaching Asst., astronomical work and instruction, Survey Camp, Univ. of Michigan. TT 0.1: SP 0.1.—Oct. 1915 to Feb. 1916 Inspector of sewer construction and on office work, City Engr.'s office, Ann Arbor, Mich. TT 0.1: SP 0.1.—Sept. to Oct. 1915 and Feb. 1916 to Jan. 1918 with Hoad & Decker, Cons. Engrs., Ann Arbor, Mich., as Asst. Engr. on water and light plant valuation, Cadillac, Mich., and on office and field work for water and sewer improvements, Muskegon Heights, Pontiac, Royal Oak and Plymouth, Mich., being in charge of construction of water, sewer and sewage-disposal projects, Muskegon Heights and Eloise, Mich. TT 1.5: SP 0.5: P 1: RC 1.—Jan. to Oct. 1918 City Engr. and Supt., Water Dept., Muskegon Heights, completed sewage-disposal works, also had administrative, engineering and construction responsibility for water, sewers, disposal, sidewalks, streets, street cleaning and garbage collection. TT 0.7: P 0.7: RC 0.7: D 0.7.—Oct. 1918 to Feb. 1919 Private, U. S. Army, Camp Wadsworth, being Asst. to Camp San. Engr. on general camp sanitation, mosquito control, sewage and water purification. TT 0.3: P 0.3: RC 0.3.—Feb. 1919 to May 1920 Engr., Spartanburg (S. C.) Water Dept., in charge of water-purification and pumping plants, involving chemical- and bacterial-plant control work, general administrative and operating supervision of filter plant, steam and electric pumping stations. TT 1.2: P 1.2: RC 1.2.—May 1920 to Jan. 1924 Asst. and Office Engr., Carolina Eng. Co., Wilmington, N. C., being Res. Engr. on water and sewer projects, Jacksonville and Cherryville, N. C., and filter plant and reservoir project, Union, S. C.; Office Engr. in charge of investigations, surveys, reports, plans, specifications and supervision of resident engineers and office force on water supply, sewerage, sewage disposal, water purification, storm drainage and paving in various cities in North Carolina, South Carolina and Virginia (jobs \$60 000 to \$448 000). TT 3.7: P 3.7: RC 3.7: D 3.7.—Jan. 1924 to Nov. 1930 Engr. in charge of water purification and steam plants and later Supt., Water Dept., Greensboro, N. C., in charge of operation, with administrative and supervisory duties, including engineering design and construction of water and sewer-plant structures, steam plant (\$130 000), reservoir and bridge construction (\$225 000), outfall sewers (\$45 000), sewage-treatment plant (\$360 000), also co-operating with Eng. Dept. on storm drainage, municipal buildings, investigations and reports. TT 6.8: P 3.8: RC 6.8: D 6.8.—Nov. 1930 to date Director, Public Works and Service, in charge of inspection, design, construction and maintenance of public works, maintenance and operation of water and sewer, garbage and street cleaning and maintenance of cemeteries and parks. TT 0.6: P 0.6: RC 0.6: D 0.6.—TT 19: SP 0.7: P 18.3: RC 14.3: D 11.8. Refers to J. L. Becton, I. C. Brower, B. S. Drane, H. G. Hunter, H. E. Miller, T. Saville, H. L. Shaner, W. E. Vest, S. R. Webb, S. H. Wright.

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(2) STABELL, FREDERICK PHILIP, Assoc. M., 5 Railroad Ave., South Norwalk, Conn. (Elected March 12, 1918.) (Age 40. Born South Norwalk, Conn.) Nov. 1914 to April 1915 student, graduate course in Highway Eng., Columbia Univ., New York City.—June 1908 to June 1911 Rodman, Instrumentman, Draftsman and Inspector, municipal and private engineering, and June 1911 to Oct. 1913 Inspector and Asst. Engr. on sewers, pavements, water-works, streets, assessment map of city, state highway surveying, etc., office of City Engr. and Street Comm., South Norwalk, Conn. TT 3.2: SP 2: P 1.2: RC 0.3: D 0.3.—Oct. 1913 to Nov. 1914 Asst. Engr., private engineering, with Samuel W. Hoyt, Jr., Norwalk. TT 1.1: P 1.1: RC 0.6: D 0.6.—April 1915 to April 1916 Asst. Engr., topography and estimates of capacity of reservoir sites, design and layout of roads, etc., with Samuel W. Hoyt, Jr., and Brown & Hoyt, Contrs., Norwalk. TT 1: P 1: RC 1: D 0.5.—April 1916 to Nov. 1917 Asst. City Engr., Norwalk, in charge of Eng. Dept., surveys, designs, estimates, etc., of streets, roads, pavements, sewers, bridges, etc. TT 1.6: P 1.6: RC 1.6: D 1.6.—Nov. to Dec. 1917 Engr., War Dept., in co-operation with Connecticut State Highway Dept., inspecting roads, bridges, etc., of Fairfield County, Conn. TT 0.1: P 0.1: RC 0.1.—Dec. 1917 to June 1918 Engr., The Connecticut Co., New Haven, Conn., on surveys of right-of-way lines, design of proposed trolley terminal, etc. TT 0.5: P 0.5: RC 0.5.—June 1918 to Jan. 1921 Engr. and Supt. of Constr., The Austin Co., Chicago, Ill., on layout and supervision of factory,

foundry and warehouse construction, etc., in various cities. *TT 2.6: P 2.6: RC 2.6: D 1.5.*—Jan. 1921 to date Vice-Pres. and Secy., The Samuel W. Hoyt, Jr. Co., Inc., Engrs., design, specifications and supervision of hydraulic dredging for fills, basins, channels, etc., bulkheads, piers, docks, sea walls, roads, sewers, real-estate developments, etc. *TT 10.5: P 10.5: RC 10.5: D 10.5.*—*TT 20.6: SP 2: P 18.6: RC 17.2: D 15.* Refers to C. M. Blair, J. H. F. Clark, A. L. Donnelly, G. S. Hubbell, C. P. Rumpf, H. J. Tippet, J. P. Wadhams.

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(1) STANTON, WILLIAM LEWIS, Assoc. M., Care, Shachtostroy, Kharkov, U. S. S. R. (Elected Jun., June 11, 1917; Assoc. M., Oct. 2, 1922.) (Age 37. Born Atlanta, Ga.) 1916 B. C. E., Univ. of Mich. *TT 4: P 4.*—Feb. to June 1916 Chairman and Rodman, Atchison, Topeka & Santa Fe Ry. *TT 0.2: SP 0.2.*—July to Dec. 1916 Instrumentman, Los Angeles (Cal.) Water Dept. *TT 0.5: P 0.5: RC 0.3.*—Jan. to June 1917 Structural Steel Detailer, Baker Iron Works, Los Angeles. *TT 0.3: SP 0.3.*—July 1917 to May 1919 with Corps of Engrs., U. S. Army, until April 1918 as-Enlisted Man, then 2nd Lieut., Co. D, 304th Engrs. *TT 1.4: SP 0.4: P 1: RC 1.*—May to July 1919 structural drafting for City Engr., Flint, Mich. *TT 0.2: P 0.2: D 0.1.*—July to Oct. 1919 Detailer and Checker, Whitehead & Kales Iron Works, Detroit. *TT 0.3: P 0.3.*—Oct. 1919 to June 1920 Instructor, Coll. of Eng., Univ. of Michigan. *TT 0.7: P 0.7.*—June to Sept. 1920 Structural Detailer and Designer, Fargo Eng. Co., Jackson. *TT 0.3: P 0.3: D 0.3.*—Oct. to Dec. 1920 Instrumentman with City Engr., Pontiac. *TT 0.2: P 0.2.*—Dec. 1920 to July 1921 Field Engr., Semet-Solvay Co., Johnstown, Pa., on construction of a by-product plant. *TT 0.6: P 0.6: RC 0.6.*—Sept. 1921 to June 1922 Instructor in Structural Eng., Univ. of Minnesota, Minneapolis, Minn. *TT 0.7: P 0.7.*—July to Aug. 1922 Structural Steel Detailer & Checker, Lewis-Hall Iron Works, Detroit, Mich. *TT 0.2: P 0.2.*—Sept. 1922 to June 1923 Associate Prof. of Civ. Eng., Agricultural and Mechanical Coll. of Texas, College Station, Tex. *TT 0.8: P 0.8: RC 0.8.*—July to Nov. 1923 and Feb. to Dec. 1927 Structural Designer with Smith, Hinchman & Grylls, Detroit. *TT 1.3: P 1.3: D 1.3.*—Jan. to Feb. 1924 Designer on concrete highway bridges, Wayne County Road Comm., Detroit. *TT 0.2: P 0.2: D 0.2.*—Feb. 1924 to Feb. 1927 Structural Designer and Res. Engr., Lockwood-Greene & Co., Detroit. *TT 3: P 3: RC 2: D 2.*—Dec. 1927 to April 1928 Bldg. Supt., Max Colter Co., Detroit, on building construction. *TT 0.4: P 0.4: RC 0.4.*—May 1928 to Dec. 1930 Structural Designer & Engr. for John H. Wickersham, Lancaster, Pa. *TT 2.6: P 2.6: RC 2.6: D 2.*—Feb. 1931 to date Structural Designer, Stuart, James & Cooke, Inc., on design of mining structures for Shachtostroy Trust, Kharkov, U. S. S. R. *TT 0.4: P 0.4: RC 0.4: D 0.4.*—*TT 18.3: SP 0.9: P 17.4: RC 8.1: D 6.3.* Refers to J. H. Bringham, W. G. Fargo, F. S. Friel, H. C. Gardner, L. M. Gram, G. A. Maney, T. C. Morris, J. J. Richey, E. C. Shoecraft, C. E. Stilson, J. H. Wickersham, W. S. Wolfe.

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(14) STAPLEY, EDWARD RAY, Assoc. M., 27 College Circle, Stillwater, Okla. (Elected Oct. 1, 1926.) (Age 41. Born Geneseo, N. Y.) 1914 C. E., and 1930 M. C. E., Cornell Univ. *TT 4: P 4.*—Summer 1913 Draftsman, Barber Asphalt Paving Co., Maurer, N. J., surveys and mapping.—June to Sept. 1914 and Aug. to Sept. 1915 Asst. Engr., City of Ithaca, N. Y., surveys, inspection, timekeeping and drafting. *TT 0.2: SP 0.2.*—Sept. 1914 to May 1916 Instructor in Civ. Eng., Cornell Univ., teaching surveys, mechanical drawing, engineering problems, sanitary engineering, Summer Surveying Camp. *TT 1.5: P 1.5.*—May 1916 to June 1917 Res. Engr., Anderson & Christie, Inc., Willson, N. C., water supply and filtration plant, gas plant and mains, storm sewer extensions, asphalt and bitulithic paving, sidewalks, curb, etc. *TT 1.1: P 1.1: RC 0.9: D 0.2.*—Feb. 1918 to Jan. 1919 2nd Lieut., U. S. Army, until March 1918 being student in Ground Officers Training School, Kelly Field, Tex., March to April 1918 Instructor in Aerial Observation, Kelly Field No. 2, Tex., April to Aug. 1918 Aviation Engr. at S. M. A., Massachusetts Inst. of Technology; Aug. to Oct. 1918 Asst. to Asst. Engr. Officer in motor and machine shops, Brooks Field, Tex. and Oct. 1918 to Jan. 1919 (except two weeks at Liberty Motor School, Detroit) Adjutant to Engr. Officer, Brooks Field. *TT 1: SP 0.1: P 0.9: RC 0.3.*—Jan. 1919 to Nov. 1924 Secy. and Treas., Geneseo (N. Y.) Automobile Co., Inc., being Asst. to Mgr., in charge of purchasing and accounting.—Feb. to Aug. 1925 Asst. Engr., Sterling Salt Co., Cuylerville, N. Y., resurvey of surface and mine property, mapping and plant drafting. *TT 0.5: P 0.5.*—Sept. 1925 to date Associate Prof. of Civ. Eng., Oklahoma Agricultural and Mechanical Coll., in charge of and teaching hydraulics and sanitary engineering, including water-supply engineering, sewer design, sewage disposal, water purifications, sanitary design and municipal engineering; at various times taught other courses; also made surveys and designs, for water supply, drainage and paving for the Coll.; for sewer and paving projects for Clarence A. Wood, and commercial tests and reports on paving, structural and building materials, filter sands, etc., acted in advisory capacity on construction of swimming pools, etc. also at present

with U. S. Army, Air Corps Reserve, as Captain. *TT 5.8: P 5.8: RC 5.1: D 0.5.—TT 14.1: SP 0.3: P 13.8: RC 6.3: D 0.7.* Refers to F. A. Barnes, J. F. Brookes, V. H. Cochrane, J. T. Fetherston, J. E. Kirkham, O. M. Leland, V. V. Long, H. N. Ogden, C. L. Walker.

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(1) **VAIL, JOHN JERVIS**, Assoc. M., 148 Commerce St., Rahway, N. J. (Elected Jan. 4, 1905.) (Age 53. Born Rahway, N. J.) 1898 B. S., and 1902 C. E., Rutgers Univ. *TT 4: P 4.—*Dec. 1898 to date with Pennsylvania R. R., until April 1900 as Rodman; 1900–1917 Field Engr. in charge, 5 years at Greenville Terminal on filling, dredging and 1 600-ft. of stone-filled bulkhead, New York Bay (3 years) and on 40 miles of track and piers (2 years) and on track elevation at Waverly, N. J., filling, bridges and sewers (2 years), on extension of railroad to New York, Newark to Hackensack River, filling, bridge masonry, track (19 miles), roundhouse, Manhattan Transfer Station (4 years), at Park Place Station, Newark, N. J. (1 year) on 6-track elevation through Rahway, N. J., filling, bridge masonry and steel superstructure (5 years), and on rock excavation, Jersey City, N. J., and three bridges (1 year); 1918–1924 Asst. Engr., at Meadows Yard, N. J., on filling and 80 miles of track (3 years), with Valuation Dept., on appraisals of special structures (3 years) and on estimates of cost of automatic electric system, New York and New Jersey P. & N. Development Comm. and other studies westbound freight yard, Greenville, N. J., Dayton (N. J.) Road bridge and Summit Ave. bridge, Jersey City (1 year); since 1925 Engr. of Constr., American Ry. Express Bldg. (300 ft. by 1 100 ft.), Long Island City (1925–1927), rebuilding Journal Sq. station, Jersey City (1926–1929), Pier K, Jersey City (1927–1928), West Bound yard, Greenville (1927–1929), Joint Lehigh Valley R. R.-P. R. R. bridge (4 000 ft. long) over Newark Bay for two tracks, 32 piers (4 pneumatic) (1927–1930), Universal Freight Handling House, Kearny, N. J. (1923), Hackensack River P. R. R. freight bridge, with (pneumatic) foundations for New Jersey State Highway Comm. bridge (1 100 ft. long) and Hackensack River passenger bridge (3 321 ft. long, pneumatic foundations) (1928–1930) and waterfront development at Jersey City, including Pier D (1930–1931). *TT 31.5: SP 0.5: P 31: RC 10: D 6.—TT 35.5: SP 0.5: P 35: RC 10: D 6.* Refers to A. W. Blyth, C. Gilman, S. Johannesson, J. F. Murray, E. B. Temple, L. White, A. R. Wilson.

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(12) **WILLARD, ERNEST CLIFFORD**, Assoc. M., 720 Corbett Bldg., Portland, Ore. (Elected April 7, 1915.) (Age 43. Born Leominster, Mass.) 1904–1905 student, Worcester Pol. Inst. *TT 0.5: P 0.5.—*1906 to 1907 with Bailey & Classon and Smith & Brooks, Civ. Engrs. and Surveyors, Fitchburg and Lowell, Mass., surveying, mapping, etc., on street railway and water-works construction, etc. *TT 0.5: SP 0.5.—*April to July 1907 with Boston & Albany R. R. on third-track construction, maintenance, etc. *TT 0.1: SP 0.1.—*July 1907 to Sept. 1908 with Metropolitan Park Comm., Boston, Mass., as Rodman, Instrumentman and Draftsman (most of time) being Chf. of Party on surveying, road, bridge, seawall, dam and building construction, general river and park improvement and (six months) designing and computing. *TT 0.6: SP 0.6: D 0.5.—*Sept. 1908 to Oct. 1910 with Comms. of Sewerage, Louisville, Ky., as Draftsman and Senior Inspector on construction of sewer system (\$4 000 000), being in charge of field and later Asst. to Res. Engr., Northwestern Div., preparing estimates, etc. *TT 2.1: SP 0.2: P 1.9: RC 1.9: D 0.5.—*Jan. to March 1911 Asst. Engr., The Arnold Co., Chicago, Ill., on valuation of Seattle Elec. Co., being in charge of work on power-plant equipment. *TT 0.2: P 0.2: RC 0.2.—*April 1911 to July 1912 Asst. Engr. to Halbert P. Gillette, Chicago, Ill., in charge of parts of valuation of Seattle Elec. Co., Everett Railway Light & Water Co., and of Whatcom County Railway, Light & Power Co. *TT 1.3: P 1.3: RC 1.3.—*July to Sept. 1912 with Fairhaven Water Co. and Raymond (Wash.) Light & Power Co., on valuations and rate studies. *TT 0.3: P 0.3: RC 0.3.—*Sept. 1912 to July 1913 Asst. Engr. with William J. Hagenah, Chicago, Ill., in charge of valuation of track and roadway system of Portland Ry., Light & Power Co. *TT 0.8: P 0.8: RC 0.8.—*July 1913 to July 1916, Oct. 1917 to July 1918 and Dec. 1920 to Jan. 1921 with Henry L. Gray, Cons. Engr., Seattle, Wash., as Engr. in charge of valuation of many public utility properties in Washington, Oregon and Idaho, including hydro-electric, water, traction, railway, light and power companies (names given in application). *TT 4: P 4: RC 4.—*July 1916 to Oct. 1917 in charge of designing and installing inventory and cost keeping system for Puget Sound Traction Light & Power Co., involving plans of entire street railway, light and power systems and detailed inventory of entire property (approx. \$50 000 000). *TT 1.3: P 1.3: RC 1.3: D 1.3.—*July 1918 to Dec. 1920 Mgr., Cost and Stores, G. M. Standiffer Constr. Corporation, Vancouver, Wash., in charge of inspection, traffic and handling of raw materials, stores, and supplies, preparation of estimates, cost accounting, and finally also in charge of Production Dept., in connection with construction of steel ships (approx. \$38 000 000). *TT 2.5: P 2.5: RC 2.5: D 0.5.—*1921 to date in private consulting practice, Portland, Ore., on investigation, valuation, rate studies

etc., for water, telephone and telegraph, light and power companies, etc., making recommendations for future construction, operating, accounting and financial policies, etc.; designed high-pressure fire system for City of Portland; Cons. Engr. for various water companies, Portland Elec. Power Co., Portland Gas & Coke Co., a lumber company, etc., in connection with valuations, design and other studies for improvements, etc.; has also been retained by financial companies in connection with determination of feasibility of water-supply, power and light projects, etc. (detailed statement forwarded with application). *TT 10.2: P 10.2: RC 10.2: D 5.—TT 24.4: SP 1.4: P 23: RC 22.5: D 7.8.* Refers to E. K. Barnum, R. H. Corey, J. W. Cunningham, H. L. Gray, J. P. Newell, F. M. Randlett, J. C. Stevens.

FROM THE GRADE OF AFFILIATE

925

(1) **BURNS, THOMAS MORRIS**, Affiliate, 26 East Tenth St., New York City. (Elected March 5, 1928.) (Age 46. Born Philadelphia, Pa.) 1905 to 1907 with John R. Lee and J. G. White & Co., Gen. Contrs., as Head Timekeeper on railway construction. *TT 1.5: SP 1.5.—1908 to 1913 Office Mgr. and Purchasing Agt. for Thomas B. Bryson, Contrs., on construction of building foundations in Cleveland, Ohio, and Fourth Ave. Subway between 10th and 27th Streets, Brooklyn, N. Y., for Board of Transportation, City of New York; also private tutoring and instruction on engineering designs of subway construction. TT 3: SP 3.—1914 to 1918 associated with T. A. Gillespie Co., Gen. Contrs., New York City, as follows: 1914 Asst. to Gen. Mgr. on construction of Dorchester Ave. Tunnel, Boston, Mass.; 1915 to 1916 Supt., Smokeless Powder Dept., International Loading Corporation, Parlin, N. J., 1917 at Parlin and Runyon, N. J., munition plants, and 1918 Supt., Oliver Munition Loading Plant, Runyon, N. J., loading components and assembling several million completed rounds of high explosive ammunition for field artillery for Russian Govt. and U. S. Govt., designed and produced successful booster, accepted by U. S. Ordnance Dept., reaching daily product of 60 000; designed original Booster Dept., and designed and assisted in construction of new booster plant; assisted in design and purchase of equipment for Smokeless Powder Dept. of U. S. Govt. loading plant at Morgan, N. J. *TT 4.5: SP 0.5: P 4: RC 3: D 1.—1919 Asst. Supt., Shand Eng. Co., Ltd., Sandwich, Ont., on construction of 36-in. reinforced concrete for water-supply pipe (3 miles). TT 1: P 1: RC 1.—1920 to 1923 Sales Mgr. and Secy., Pacific Coast Motor Sales Co., Inc., San Francisco, Cal.—1924 to 1926 Pacific Coast Eng. Representative for T. A. Gillespie Co., in charge of activities of East Jersey Pipe Company in fabrication and field erection of approx. 40 miles of Lock-Bar Steel Pipe in Portland, Ore. and Tacoma and Seattle, Wash. *TT 3: P 3: RC 3.—1927 to date Executive Engr., East Jersey Pipe Co., New York City, being Engr. Estimator, responsible for estimate of construction contracts involving steel pipe, including prices of raw materials, factor, fabrication, transportation and field construction costs, duties as Executive Engr. included explaining (by correspondence) to clients engineering details of design and fabrication in connection with steel pipe, observing that engineers' specifications have been carried out, etc. TT 4: P 4: RC 3: D 1.—Prior to May 1926 also in field and office on railroad construction, building foundations, inspection work, concrete pipe construction, steel pipe fabrication, subway construction and general office work.—TT 17: SP 5: P 12: RC 10: D 2.* Refers to F. S. Childs, G. H. Fenkell, G. A. Johnson, W. I. Klein, F. M. Randlett, C. V. Witt.**

FROM THE GRADE OF JUNIOR

926

(1) **ALLAN, WILLIAM**, Jun., 116 Newkirk St., Jersey City, N. J. (Elected Dec. 15, 1924.) (Age 28. Born Long Island City, N. Y.) Licensed Prof. Engr., New York State.—1924 C. E., Pol. Inst. of Brooklyn. *TT 4: P 4.—June 1920 to June 1924 (while student) Rodman, Transitman and Draftsman-Computer on development work for L. C. L. Smith, Cons. Engr., and (after Aug. 1923) Transitman on building construction and subdivisions for R. E. Carlin, Civ. Engr., both of Long Island City, N. Y.—June 1924 to Feb. 1925 Member, Probationary Observation Circuit, Bethlehem (Pa.) Steel Co., also in Bridge and Fabrication Dept., estimating and designing steel structures. *TT 0.6: SP 0.1: P 0.5.—Feb. 1925 to Sept. 1929 with R. E. Carlin, until June 1926 as Field Engr. on foundation, building and sewer construction, then Asst. in charge of computations, designs and drafting. TT 4.5: P 4.5: RC 4.5: D 3.2.—Sept. 1929 to date Asst. in Advanced Structures, Polytechnic Inst. of Brooklyn, problem work in deflections, indeterminate structures, secondary stresses and use of Beggs deformeter apparatus; also Bridge Designer, New Jersey State Highway Comm., Jersey City, N. J., checking shop detail drawings, computing stresses, designing foundations**

and superstructure for heavy bridges and viaduct for Route 25 connecting link and checking contract drawings. *TT 1.9: P 1.9: RC 1.9: D 1.9.—TT 11: SP 0.1: P 10.9: RC 6.4: D 5.1.* Refers to H. R. Codwise, R. S. DuBois, S. Johannesson, L. R. Shellenberger, S. A. Snook, E. J. Squire.

927

(11) BANTA, ARTHUR PERRY, Jun., 681 South Oakland Ave., Pasadena, Cal. (Elected Jan. 17, 1927.) (Age 27. Born Brooklyn, N. Y.) 1926 A. B. in Civ. Eng., Stanford Univ. 1928 M. S. in Civ. Eng., Cal. Inst. Tech. *TT 4: P 4.*—Summers 1923 and 1924 Rodman, Southern Pacific R. R. Co.—Summer 1925 Levelman, U. S. National Park Service (3 months) and Inspector, Great Western Power Co., on hydraulic fill dam (1 month).—June to Sept. 1926 Chf. of Party on road location, Cascade County, Mont. *TT 0.3: P 0.3: RC 0.3.*—Sept. 1926 to July 1927 Fellow in Eng., California Inst. of Technology, research on activated sludge process and water permeability of concrete; also Concrete Technologist, Los Angeles Harbor Investigating Comm., Cons. Engr., Celite Co. on Patents and Engr. for Leeds & Barnard on small sewage collecting and disposal system. *TT 0.8: P 0.8: RC 0.8.*—July to Sept. 1927 Asst. Engr. for Quinton, Code & Hill, Los Angeles, Cal., on arch dam design. *TT 0.2: P 0.2: RC 0.2: D 0.2.*—Sept. 1927 to date Asst. Engr., Los Angeles County Sanitation Dists., on designs and studies for pumping and treatment plants and trunk sewers, research on sludge digestion and filtration. *TT 3.7: P 3.7: RC 3.7: D 3.7.—TT 9: P 9: RC 5: D 3.9.* Refers to C. R. Compton, R. A. Hill, T. H. King, A. M. Rawn, L. B. Reynolds, F. Thomas, A. K. Warren.

928

(1) BHIROMYA, TATT MAKARA, Jun., Bangkok, Siam. (Elected March 11, 1929.) (Age 30. Born Patrew, Siam.) 1925 B. S., Mass. Inst. Tech. *TT 4: P 4.*—Aug. 1925 to date with Royal State Rys. of Siam, until Jan. 1926 as Asst. Engr., Technical Service, on design and survey; Jan. to April 1926 Asst. Constr. Engr., Constr. Service, on earthwork, survey and bridges; since April 1926 Acting Maintenance Engr., Maintenance of Ways and Works Service, on maintenance of track, steel and timber bridges, buildings, and flood and betterment works, Bangkok (7 months), Chumphon (3 years) and Yale (since Nov. 1929) Dists. *TT 5.9: P 5.9: RC 5.3.—TT 9.9: P 9.9: RC 5.3.* Refers to J. B. Babcock, 3d, H. K. Barrows, H. F. Scholtz, C. M. Spofford, P. Sukhum.

929

(7) CASSIL, ARMOND, Jun., 2535 West Grand Blvd., Detroit, Mich. (Elected June 7, 1926.) (Age 32. Born Mt. Vernon, Ohio.) 1921 B. S. C. E., Univ. of Mich. *TT 4: P 4.*—Summers 1916–1918 Rodman, and July to Dec. 1921 Third Asst. Engr., Newark, Ohio, Baltimore & Ohio R. R., on survey party staking main line curves, side tracks and setting ballast stakes. *TT 0.3: SP 0.3.*—Summer 1919 Rodman, Jan. 1922 to June 1923 Asst. Engr. on studies of methods and costs of railroad track maintenance work and grading, and June to Sept. 1923 Instrumentman on transit and level work for second track, Detroit to Plymouth, Mich., all for Pere Marquette Ry. Co. *TT 1.5: SP 0.1: P 1.4.*—Sept. 1923 to May 1924 Div. Engr. in responsible charge of maintenance of terminal properties of Pere Marquette, Wabash and Pennsylvania Railroads in Detroit, Mich. *TT 0.6: P 0.6: RC 0.6.*—May 1924 to date Railroad Contr., since Feb. 1930 as Armond Cassil, Inc., track construction, etc., including work for Chrysler Corporation, Chevrolet Motor Co., etc.; at present on contract for approach fills for highway bridge at St. Joseph, Mich., and on main-line track changes for Pere Marquette R. R. Co., due to abandoning a detour over Michigan Central R. R. at Southern Ave.; April 1929 to Jan. 1930 Receiver for a trucking and excavating firm in Detroit (business approx. \$83 000), (detailed statement forwarded with application). *TT 7.2: P 7.2: RC 7.2.—TT 13.6: SP 0.4: P 13.2: RC 7.8.* Refers to F. H. Alfred, P. Chipman, J. E. Evans, G. H. Harris, R. L. Longshore, G. H. Riddle, C. S. Sheldon.

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(11) CATES, WALTER HERBERT, Jun., 1428 Holbrook St., Los Angeles, Cal. (Elected March 14, 1927.) (Age 30. Born Santa Monica, Cal.) Registered Civ. Engr., State of California.—1924 B. S. in C. E., Univ. of Cal. *TT 4: P 4.*—1918 to 1920 (intermittently) Chairman for P. M. Lorraine, Alhambra, Cal., on various sub-divisions in vicinity of Los Angeles.—Summer 1920 Chairman and Transitman for George Greenough on golf courses near Los Angeles.—Summer 1921 Chairman, Eng. Dept., Los Angeles.—May 1924 to Feb. 1925 Draftsman, Computer and Estimator, San Joaquin River Water Storage Dist., Los Banos, Cal., canal and irrigation for 500 000 acres. *TT 0.3: SP 0.3.*—March 1925 to March 1926 Asst. Engr., La Puente Valley County Water Dist. and La Grande Source Water Co., Puente, Cal., surveys, designs, plans and specifications, supervising and inspecting construction of municipal water system and irrigation project. *TT 1: P 1: RC 1: D 0.5.*—March 1926 to date Hydr. and Sales Engr., Western Pipe and Steel Co. of California; Los Angeles, responsible for designing, estimating and selling of pipe lines, tanks, industrial

buildings, well casing, culvert drainage pipe, etc., in 1930 being Engr. in charge of construction of 16-mile main supply water pipe line for City of San Diego. *TT 5.3: P 5.3: RC 4.5: D 5.—TT 10.6: SP 0.3: P 10.3: RC 5.5: D 5.5.* Refers to L. J. Alexander, P. Bauman, E. R. Bowen, F. D. Pyle, O. A. Stone, C. R. Sumner, K. Q. Volk.

931

(7) CHRISTENSON, ELMER JOHN, Jun., Lynxville, Wis. (Elected Jan. 14, 1929.) (Age 27. Born East Ellsworth, Wis.) 1927 B. S., Univ. of Minn. *TT 4: P 4.*—June 1927 to date Jun. Engr., U. S. Engr. Office, St. Paul, Minn., until Nov. 1927 drafting, computations, surveys, in charge of test borings and test pile driving, Nov. 1927 to April 1928 in office at Cincinnati, Ohio, assisted on design of a lock and dam, April to Oct. 1928 in charge of surveys, test borings, drafting and computations, Oct. 1928 to March 1931 Prin. Asst. to Engr. in charge of construction of a lock and dam, and since March 1931 in charge of dredging at Lynxville, Wis., changing course of Mississippi River, involving building of dykes, etc. *TT 4.1: P 4.1: RC 3.—TT 8.1: P 8.1: RC 3.* Refers to F. Bass, A. S. Cutler, C. I. Grimm, H. M. Hill, J. I. Parcel.

932

(11) CRIST, MARION LOWELL, Jun., 1031 South Broadway, Los Angeles, Cal. (Elected April 18, 1927.) (Age 28. Born Roann, Ind.) 1925 A. B. in Civ. Eng., Stanford Univ. *TT 4: P 4.*—March 1925 to date Associate Engr., Burns-McDonnell-Smith Eng. Co., Los Angeles, Cal., until Aug. 1925 being Inspector, Sept. to Dec. 1925 Res. Engr. on construction, Jan. to Dec. 1926 directing surveys and office investigations and since Jan. 1927 directing conception of sanitary engineering projects in field and office. *TT 6.3: SP 0.2: P 6.1: RC 4.8: D 1.—TT 10.3: SP 0.2: P 10.1: RC 4.8: D 1.* Refers to T. H. King, R. Linton, R. E. McDonnell, C. D. Marx, L. B. Reynolds, A. J. Smith, C. A. Smith.

933

(1) DERBY, ELLES MAYO, Jun., 1773 East Thirteenth St., Brooklyn, N. Y. (Elected March 5, 1928.) (Age 28. Born Brooklyn, N. Y.) 1927 C. E., Pol. Inst. of Brooklyn. *TT 4: P 4.*—June 1926 to June 1928 Instructor in Civ. Eng., Polytechnic Inst. of Brooklyn, being in charge of classes in strength of materials, elements of structures, etc., and Asst. in bridge design, advanced structures, hydrographic and plane surveying and reinforced concrete theory; also Feb. to March 1927 Cons. Designer, Transit Equipment Co., New York City, designed structural steel frame for two 80-ton electric locomotives, April 1927 Consultant, Square Realty Co., New York City, office work, subdividing Deepark Terrace at Sparrowbush, N. Y., Oct. 1927 Cons. Surveyor to A. H. Schwartz, Laurel, N. Y., made survey of estate, being Chf. of Party and Instrumentman, and March to June 1928 Draftsman with C. W. Hudson, Cons. Engr., New York City, making tracings and title page for contract drawings for New Washington Bridge at Providence, R. I. *TT 1: P 1.*—June 1928 to May 1929 Detailer, Phoenix Bridge Co., Phoenixville, Pa., detailed and checked shop detail drawings for plate girder bridges and bascule lift bridge, designed and checked design for approaches to Lincoln Highway Bridge over Susquehanna River (alternate design); after Sept. 1928 also Instructor in Civ. Eng., Drexel Inst. Evening Coll., Philadelphia, in charge of classes in mechanics and in strength of materials. *TT 0.9: P 0.9: D 0.1.*—May 1929 to date Designer and Detailer, New York Central R. R., New York City, designing, checking, investigating and estimating steelwork for bridges, tunnels, viaducts, buildings and miscellaneous framing; since Oct. 1929 also Instructor, Pratt Inst. Evening School in mathematics and (since Jan. 1930) Structural Design. *TT 1.8: P 1.8: RC 1.8: D 1.8.—TT 7.7: P 7.7: RC 1.8: D 1.9.* Refers to H. P. Hammond, C. W. Hudson, J. R. Lambert, C. W. MacCornack, J. B. Smiley, E. J. Squire.

934

(1) DOEBLER, HORATIO WARD, Jun., 1758 Brooklyn Ave., Brooklyn, N. Y. (Elected Dec. 14, 1925.) (Age 32. Born Ft. Wayne, Ind.) Registered Prof. Engr., Commonwealth of Pennsylvania.—1922 C. E., Valparaiso Univ.—Jan. 1919 to Jan. 1920 Student, Civ. Eng. course, Massachusetts Inst. of Technology. *TT 0.5: P 0.5.*—Oct. 1917 to July 1918 Draftsman, Blaylock & Knapp, Steel Constr., Chicago, Ill., detailing structural steel for grain-elevator buildings. *TT 0.4: SP 0.4.*—July 1918 to Jan. 1919 Export Inspector, American Car & Foundry Co., Huntington, W. Va., in charge of inspection of construction of steel railroad cars for French Comm. and U. S. R. R. A.; inspection of foundry, machine and erection shops. *TT 0.3: SP 0.3.*—Jan. to Nov. 1920 Draftsman, Turner Constr. Co., Boston, Mass., detailing reinforced concrete for industrial buildings for Diamond Match Co., Springfield, Mass. *TT 0.4: SP 0.4.*—Nov. 1920 to March 1921 Draftsman, American Car & Foundry Co., Huntington, W. Va. *TT 0.2: SP 0.2.*—March 1921 to Dec. 1922 student.—Jan. to April 1923 Instrumentman with S. V. Haworth, Engr., Huntington. *TT 0.1: SP 0.1.*—April to Sept. 1923 Rodman and Inspector, Baltimore & Ohio R. R., West Virginia Dist., on reconstruction of bridges and shops, lines and grades, general inspection of building construction.

TT 0.2: SP 0.2.—Sept. 1923 to Oct. 1925 Draftsman, Turner Constr. Co., New York City, detailing reinforced concrete, general building construction. **TT 1: SP 1.**—Oct. 1925 to July 1926 with Reid Ice Cream Corporation, Brooklyn, N. Y., as Asst. Engr. of Design and Supt. of Constr. of plant at Patchogue, L. I.; made detailed layouts for Newark, New York City and Mineola plants, including original plant in Brooklyn. **TT 0.8: P 0.8: RC 0.8: D 0.8.**—July 1926 to date with Louis Kallischer, Inc., Elec. Engrs., Brooklyn, until Feb. 1929 as Supt. and Engr., in charge of supervision of electrical construction (\$500 000) of plant for Brooklyn Union Gas Co. in Greenpoint, laying out and supervising construction of pumping stations, with four 950-h.p. slip-ring motors, erecting twelve Gen. Elec. truck switches, supervising layout and construction of five substations and complete underground feeder system and wiring and connecting motors for making water and coke gas plants; Feb. 1929 to Feb. 1930 estimating and supervising electrical installation for 16-story apartment house and since Feb. 1930 estimating and supervising various power installations. **TT 5: P 5: RC 5: D 5.**—**TT 8.8: SP 2.5: P 6.3: RC 5.8: D 5.8.** Refers to R. W. Boyd, V. S. Doeblner, C. F. Mebus, H. C. Paddock, L. S. Stiles.

935

(1) **FERRIS, CHARLES BIRDSALL**, Jun., 758 North Broadway, Yonkers, N. Y. (Elected Jan. 16, 1928.) (Age 27. Born New York City.) 1927 C. E., N. Y. Univ. **TT 4: P 4.**—Summers 1924 and 1925 and Feb. 1926 to Feb. 1927 (while student) Asst. Field Engr., Thomas Crimmins Contr. Co., New York City, being responsible for line and grade for foundations of two office buildings, a waterless gas holder, a theatre and a factory building, and (after May 1926) Supt. and Engr. with Leddy & Moore, Bldrs., New York City, in charge of construction of a 17-story office building.—July 1927 to Jan. 1931 Field Engr. and Asst. Supt., Thompson-Starrett Co., New York City, on Brooklyn Paramount and Loew's Kings theatres, Paramount office building, Downtown Athletic Club, substructures of Goldman Sachs and Herald Tribune buildings, addition to Equitable Life Insurance Bldg., being responsible for line and grade and for part of brick and steel erection and interior trim and finish, having charge of 20 lower floors on Downtown Club also supervising pipe line, open piers, spread footings and pneumatic caisson foundations. **TT 3.6: P 3.6: R 1.8.**—Jan. 1931 to date member of firm, Westchester Bldrs., Contrs. and Bldrs. in Westchester County, estimates, bids, contracts and looks after new business. **TT 0.5: P 0.5: RC 0.5.**—Since Oct. 1927 also Co. Commander, N. Y. N. G., commanding Co. D, 102d Engrs., and since June 1928 Capt., Corps of Engrs., Officers' Reserve Corps, N. Y. N. G., in charge of engineering instruction, including bridging, map-reading, topographical sketching, reconnaissance, etc.—**TT 8.1: P 8.1: RC 2.3.** Refers to A. Haring, E. G. Hooper, C. T. Schwarze, C. H. Snow, D. S. Trowbridge.

936

(2) **GRONQUIST, CARL HARRY**, Jun., Bucksport, Me. (Elected July 11, 1927.) (Age 27. Born New York City.) 1925 B. S. and 1927 M. S., Rutgers Univ. **TT 4: P 4.**—Summers 1923-1926 Rodman with Lozier, Zabriskie & Van Kuren, Hackensack, N. J. (1923 and 1924), Draftsman and Designer, Improvement Dept., American Car & Foundry Co., New York City (1925) and Draftsman with Post & McCord, New York City (1926). July 1925 to July 1927 Graduate Asst. in Civ. Eng. and Graduate Student in Structural Eng., Rutgers Univ.—Aug. 1927 to date with Robinson & Steinman, Cons. Engrs., New York City, as Draftsman and Designer, assisting on design, plans, estimates and computations for highway bridges, Res. Engr. on reconstruction of Hackensack River Bridge (\$235 000) (April 1929 to Jan. 1930) and Res. Engr., Waldo-Hancock Bridge projects in Maine (\$1 000 000), in charge of preliminary surveys, supervision of borings, triangulation, supervising construction for engineers (Jan. 1930 to date). **TT 4: SP 0.3: P 3.7: RC 2.8: D 2.**—**TT 8: SP 0.3: P 7.7: RC 2.2: D 2.** Refers to G. E. Beggs, W. G. Grove, H. N. Lendall, H. D. Robinson, E. H. Rockwell, D. B. Steinman.

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(7) **HAKIN, WALTER ALWYNE**, Jun., 9235 Agnes Ave., Detroit, Mich. (Elected Nov. 15, 1926.) (Age 31. Born Harley, near Rotherham, England.) 1923 Associate in Civ. Eng., Univ. of Sheffield, England. **TT 4: P 4.**—April 1919 to Jan. 1926 with Newton Chambers & Co., Ltd., Thorncliffe, near Sheffield, England, until June 1923 (while student) on pattern making, machine shop work, and structural steel erection; then Eng. Asst. on design of gas and steel works, blast furnace, coal by-product and colliery plant and equipment, including gas holders, retort iron and bridge work, steel stacks, pipe lines, etc., drawings, setting out foundations for industrial plant at works, estimates, etc. **TT 2.5: P 2.5: RC 2.5: D 2.5.**—March 1926 to April 1929 Structural Engr. with Albert Kahn, Inc., Detroit, Mich., on structural drafting, investigated strength of welded connections in structural members; design of factory buildings and reinforced concrete and steel-frame office buildings, special investigation as to effect of mechanical vibration (forge plant hammers) upon surrounding

property, etc. *TT 3.1: P 3.1: RC 2.1: D 3.1.*—April 1929 to date with Michigan Steel Casting Co., Detroit, until Oct. 1930 as Design Engr., in chrome-nickel alloys, alloy and carbon steels, application of rolled steels of special analysis, equipment, development and design, structural components and mechanisms for sustained high-temperature service in blast furnace, steel mill, heat treating, oil refining, ceramic and sulphite industries, heat and corrosion resistant alloys for general purposes, and since Oct. 1930 Chf. Engr. *TT 2.2: P 2.2: RC 2.2: D 2.2.*—*TT 11.8: P 11.8: RC 6.8: D 7.8.* Refers to E. A. Cross, A. L. Drabkin, J. T. N. Hoyt, J. Husband, D. A. Molitor, N. K. Sheppard, R. A. Smead.

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(1) **HARDESTY, JAMES MARION**, Jun., 463 West St., New York City. (Elected Oct. 21, 1924.) (Age 30. Born Cleburne, Tex.) 1923 B. S. in Civ. Eng., Univ. of Tex. 1925 M. S. in Civ. Eng., Univ. of Ill. *TT 4: P 4.*—Sept. 1923 to June 1927 student, Graduate School, and Sept. 1923 to June 1925 also Research Asst. in Structural Eng. Laboratory, Eng. Experiment Station, Univ. of Illinois; summers Rodman, Wichita Falls Water Improvement Dist., on main irrigation canal location (1922), Instrumentman with Stone & Webster, Ft. Worth, Tex., on street railway construction and interurban railway location (1923).—Structural Draftsman, Board of Transportation, City of New York, on design of structures for 8th Ave. subway (1924) and Structural Designer, Chicago, Milwaukee & St. Paul Ry., on buildings and bridges (1925 and 1926). *TT 1: P 1.*—Sept. 1927 to date Member of Technical Staff, Bell Telephone Laboratories, New York City, being in charge of research on engineering materials used in telephone communication subways and design and methods of constructing these subways. *TT 3.8: P 3.8: RC 3.4: D 3.8.*—*TT 8.8: P 8.8: RC 3.4: D 3.8.* Refers to H. Cross, E. P. Goodrich, W. C. Huntington, M. S. Ketchum, S. Willmot, W. M. Wilson.

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(8) **HARMAN, HOWARD WYMES**, Jun., 904 Jefferson Bldg., Peoria, Ill. (Elected Aug. 30, 1926.) (Age 32. Born Peoria, Ill.) 1922 B. S. C. E., Univ. of Ill. *TT 4: P 4.*—June 1922 to date with Jacob A. Harman, and Jacob A. Harman, Inc., Peoria, Ill., until Sept. 1924 on drafting, topographic surveys, highway location and supervision and concrete design; Sept. 1924 to March 1927 in charge of irrigation and rice farming (1 000 acres), near Elsberry, Mo. and of construction of two irrigation pumping plants and irrigation system for rice land (2 500 acres); March 1927 to Oct. 1928 Supt. of Constr. of houses and small buildings; since Oct. 1928 on hydraulic studies, Illinois River; sewage-treatment plant, bridge, retaining wall and reinforced concrete design; drafting room supervision of barge design and supervision of operation of sewage-treatment plants. *TT 6.2: SP 1.4: P 4.8: RC 4.3: D 2.2.*—*TT 10.2: SP 1.4: P 8.8: RC 4.3: D 2.2.* Refers to H. E. Babbitt, M. Blanchard, M. L. Enger, H. F. Ferguson, J. A. Harman, C. W. Okey, G. W. Pickels.

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(3) **HOBBS, HAROLD WAYNE**, Jun., 328 Ellis St., Syracuse, N. Y. (Elected July 12, 1926.) (Age 29. Born in Graham County, Kans.) Licensed Prof. Engr. and Land Surveyor, New York State. 1925 B. S. in Civ. Eng., Univ. of Wyo. 1928 M. S. in C. E., Syracuse Univ. *TT 4: P 4.*—Summers 1920, 1922 and 1923 Chairman, Rodman and Concrete Inspector, Wyoming State Highway Dept.—Summer 1924 Levelman and Draftsman, U. S. Bureau of Reclamation, Riverton (Wyo.) Project, on bench levels, lateral layout and design.—Sept. 1925 to June 1928 Instructor in Civ. Eng. and Drafting, Coll. of Applied Science, Syracuse Univ. *TT 2.2: P 2.2.*—Summer 1926 Asst. Engr. with Henry C. Allen, Cons. Engr., Syracuse, on surveys, sewers and disposal plant (1 month) and Structural Designer, Solvay Process Co., on truss bridges, towers, bents, kiln shells and belt conveyors (2 months). *TT 0.3: P 0.3.*—June to Sept. 1927 and June 1928 to date Asst. Engr., Syracuse Intercepting Sewer Board, on topographic mapping and contract plans for sewers and treatment works, and (since June 1928) in responsible charge of foundation surveys for dams and sewers, stream gauging and runoff computations, flood control and dam design, highway relocation, selection of earth materials for dams, and estimates of costs of dams and sewers; since 1926 (spare time) in private practice on surveys, subdivisions, street-grading plans, sewer surveys, consulting work on rebuilding of an earth water-supply dam, subsurface investigations for building foundations, etc. *TT 3.8: P 3.8: RC 2.3: D 1.1.*—*TT 9.8: P 9.8: RC 2.3: D 1.1.* Refers to H. C. Allen, J. C. Fitterer, S. N. Grimm, G. D. Holmes, W. A. Lyon, L. Mitchell, F. W. Stephens.

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(10) **OLSON, HOWARD OSCAR**, Jun., 612 Tenth Ave. N., Nashville, Tenn. (Elected Oct. 1, 1926.) (Age 30. Born Benson, Minn.) 1922 B. S. in C. E., Univ. of S. Dak. *TT 4: P 4.*—June to July 1922 Asst. County Engr., Emmons County, Linton, N. Dak.—July 1922 to March 1923 Deck Officer, U. S. Coast & Geodetic Survey, on hydrographic and topographic survey off coast of Gulf of Mexico. *TT 0.7: P 0.7: RC 0.7.*—March 1923 to May 1925 Engr., Illinois State Highway Comm., special investigational work and in charge of testing

and inspecting materials, Div. No. 3. *TT 1.9: SP 0.3: P 1.6: RC 1.6.*—May 1925 to Oct. 1928 Engr., Tennessee Dept. of Highways, supervising testing and inspecting of materials, construction work on concrete highways and bridges, design mix of concrete, investigational work on concrete, etc. *TT 3.5: P 3.5: RC 3.5.*—Oct. 1928 to July 1929 Field Engr. of Tests, Kentucky State Highway Dept., designed special concrete mixes used with local materials, responsible for local material used. *TT 0.7: P 0.7: RC 0.7.*—Aug. 1929 to date Engr., Franklin Limestone Co., responsible for production and in charge of construction and improvements in plants, having engineering contact with all engineers, contractors, highway departments, etc. *TT 2: P 2: RC 1.8: D 1.8.*—*TT 12.8: SP 0.3: P 12.5: RC 8.3: D 1.8.* Refers to E. D. Akers, C. M. Colvin, R. N. Coolidge, A. T. Goldbeck, R. S. Lillard, J. L. Neely, Jr., C. H. Olmstead.

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(1) **RAPP, HENRY CLINTON**, Jun., Casilla 15, Tocopilla, Chile, S. A. (Elected Nov. 12, 1923.) (Age 29. Born Troy, Ohio.) Feb. to Sept. 1920, Oct. 1921 to June 1922, and Oct. 1923 to Feb. 1924 student, Civ. Eng. course, California Inst. of Technology. *TT 1: P 1.*—Sept. 1920 to April 1921 Chainman and Levelman and April to Sept. 1921 Stream Gauger, Southern California Edison Co. *TT 0.5: SP 0.5.*—June 1922 to Oct. 1923 with Palos Verdes Estates, Cal., successively as Rodman, Recorder and (1 year) Chf. of Party, on primary and secondary triangulation, base levels and road location and construction. *TT 1.2: SP 0.2: P 1: RC 1.*—April to July 1924 Party Chf. and Computer with Chas. Foulke, San Bernardino, Cal., on mountain subdivision and road location. *TT 0.3: P 0.3: RC 0.3.*—July to Nov. 1924 Chf. of Party and Computer, Olmsted Bros., Palos Verdes Estates, Cal., on triangulation and road location, Benmar Hills, Burbank, Cal. *TT 0.3: P 0.3: RC 0.3.*—April to May 1925 Draftsman, Southern California Telephone Co., Los Angeles, Cal. *TT 0.1: SP 0.1.*—June 1925 to Sept. 1926 Field Engr. on location and construction of Palos Verdes Coast Highway and Party Chf. on subdivision and land development, Palos Verdes Estates, Cal. *TT 1.3: P 1.3: RC 1.1.*—Sept. 1926 to March 1927 Field and Office Engr., Arrowhead Villas, Lake Arrowhead, Cal., on mountain subdivision and development and road location and construction. *TT 0.5: P 0.5: RC 0.2.*—March to Oct. 1927 Field and Office Engr., Mt. Whitney Union Mining Co., Owenyo, Cal., on mine development and construction of flotation mill. *TT 0.6: P 0.6: RC 0.6: D 0.1.*—Oct. to Dec. 1927 Field and Office Engr., Mammoth Consolidated Mines, Mammoth Lakes, Cal., on preliminary survey, estimate and report for small hydro-electric plant. *TT 0.1: P 0.1: RC 0.1: D 0.1.*—Jan. 1928 to Jan. 1930 Field and Office Engr., with Rose & Evans, Burbank, Cal., Hollywood Riviera Development, on subdivision computing, in responsible charge of street design, layout and construction, quantities and drainage design and construction. *TT 1.9: SP 0.1: P 1.8: RC 1.8: D 1.8.*—Jan. 1930 to date with Anglo-Chilean Consolidated Nitrate Corporation, until March 1931 as Second Office Asst. to Constr. Supt., on labor contracts, estimates, material requisitions, work orders, construction accounts and shop orders and issue of drawings, and since March 1931 Mine Supply Engr., supplying material and equipment for mine construction and operation, Oficina Pedro de Valdivia (Lantaro Construction), Tocopilla, Chile. *TT 1.4: SP 0.1: P 1.3: RC 1.3.*—*TT 9.2: SP 1: P 8.2: RC 6.7: D 2.* Refers to R. L. Anderson, R. E. Baylor, E. J. Carrillo, M. D. Glessner, L. Hussey, W. D. Larrabee, W. W. Michael, E. B. Nelson, R. B. Worthy.

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(6) **REDD, CARL LEITNER**, Jun., Point Pleasant, W. Va. (Elected Oct. 10, 1927.) (Age 30. Born Peachburg, Ala.) 1927 B. S., Mass. Inst. Tech. *TT 4: P 4.*—Nov 1922 to Aug. 1924 and Aug. 1927 to Feb. 1928 with Louisville & Nashville R. R. Co., until Nov. 1923 as Rodman, then Concrete Inspector on concrete and steel work and in fabrication plant on caisson steel for Rigolets (La.) Bridge, and after Aug. 1927 Instrumentman on bridge construction. *TT 1.4: SP 0.9: P 0.5.*—Feb. 1928 to date with J. E. Greiner Co., Baltimore, Md., until Aug. 1928 as Asst. to Res. Engr. on James River Bridge, Aug. 1928 to April 1929 Res. Engr., Midland Trall-Kanawha River Bridge, April 1929 to Nov. 1930 in office, and since Nov. 1930 Res. Engr. on Pt. Pleasant-Henderson Bridge. *TT 3.5: P 3.5: RC 3.*—*TT 8.9: SP 0.9: P 8: RC 5.* Refers to H. H. Allen, W. T. Ballard, R. M. Miller, O. H. Schroedl, G. R. Smiley, J. E. Wheeler, W. Willoughby.

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(1) **ROBINSON, JOHN EDWARD**, Jun., 954 East Thirty-second St., Brooklyn, N. Y. (Elected Nov. 15, 1926.) (Age 29. Born Brooklyn, N. Y.) 1926 B. S. in C. E., Towne Sci. School, Univ. of Pa. *TT 4: P 4.*—Sept. 1922 to June 1926 (while student) Asst. in C. E. Dept., Towne Scientific School, drafting, assisting in testing laboratories, etc.; summers Draftsman, American Bridge Co.—Aug. 1918 to Sept. 1922 and June 1926 to date (except Jan. 1930 to March 1931) with American Bridge Co., until Sept. 1922 as Draftsman on structural steel design drawings and estimating; June 1926 to Sept. 1928 Detaller, at

Elmira Heights, N. Y., on mill and office buildings and railroad and highway bridges; Oct. 1928 to Jan. 1930 and March 1931 to date Designer and estimator, Bldg. and (since May 1931) Bridge Depts., New York City, on mill and office buildings, etc.; Jan. 1930 to March 1931 Designer, loaned to Anglo-Chilean Consolidated Nitrate Corporation, New York City, to design structural steel for Pedro de Valdivia plant in Chile, including power and drive houses, conveyors, crystallizing, screening, filter, and crushing and filter plants, etc. TT 7.1: SP 2: P 5.1: RC 2.8: D 2.—TT 11.1: SP 2: P 9.1: RC 2.8: D 2. Refers to R. R. Graham, W. G. Grove, F. C. Moore, S. J. Ott, J. E. Wadsworth, F. P. Witmer.

945

(1) SPROTT, HOWARD JUDSON, Jun., 124 West Seventy-eighth St., New York City. (Elected Jan. 17, 1927.) (Age 28. Born Boston, Mass.) 1926 B. S. in Civ. Eng., Tufts Coll. TT 4: P 4.—June to Oct. 1926 Constr. Engr. for Hegeman-Harris Co., on Foundations, Dartmouth Coll. Library, Hanover, N. H. TT 0.3: P 0.3: RC 0.3.—Oct. 1926 to July 1931 with Metropolitan Dist. Water Supply Comm. of Massachusetts, on Wachusett-Colbrook Tunnel, until Jan. 1927 as Instrumentman, then Asst. Engr. first in charge of field party, then Sec. Engr. in charge of 650-ft. shaft and adjacent tunnel, and finally with Division office on investigations and miscellaneous engineering work. TT 4.4: SP 0.3: P 4.1: RC 4.1: D 0.2.—TT 8.7: SP 0.3: P 8.4: RC 4.4: D 0.2. Refers to H. P. Burden, F. E. Fahlquist, W. W. Peabody, F. N. Weaver, E. H. Wright.

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(15) STEVENSON, HOMER EADS, Jun., Sequin, Tex. (Elected Dec. 5, 1927.) (Age 27. Born San Luis Potosi, Mexico.) Sept. 1921 to June 1923 Student, Civ. Eng. Dept., Agricultural and Mechanical Coll. of Texas. TT 1: P 1.—June 1923 to Jan. 1926 with W. E. Simpson Co., San Antonio, Tex., until Aug. 1924 as Draftsman on highway plans and estimates and Inspector on reinforced concrete construction, then Transitman on highway location, and after Sept. 1924 Res. Engr. on highway construction, concrete bridges. TT 2.1: SP 0.7: P 1.4: RC 1.4.—Jan. 1926 to Oct. 1929 Constr. Engr., Mexican Light & Power Co., Ltd., Mexico, D. F. Mexico, until Dec. 1926 on hydro-electrical construction, power house and installation of equipment, then in charge of diamond drilling, test pitting and exploration on major damsites on Rio Lerma, and after March 1928 on construction of rock fill dam, pressure tunnel, intakes, diversion works and permanent camp. TT 3.7: P 3.7: RC 3.7: D 2.4.—Nov. 1929 to Sept. 1930 Field Engr., City of Stockton, Cal., on construction of Calaveras concrete arch dam. TT 0.8: P 0.8: RC 0.8.—March 1931 to date Constr. Supt., Sumner Solitt Co. of Texas, on construction of roof weir movable dam, power house and spillway. TT 0.4: P 0.4: RC 0.4.—TT 8: SP 0.7: P 7.3: RC 6.4: D 2.4. Refers to P. Bauman, G. D. Camp, H. D. Chapman, G. R. G. Conway, W. S. Post, W. Ranney, W. E. Simpson.

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(6) STUDDERT, WILLIAM WALTON, Jun., Trust Co. Bldg., Franklin, Pa. (Elected March 10, 1930.) (Age 28. Born Washington, N. C.) 1920 to 1921 and 1924 to 1925 student in Civ. Eng., North Carolina State Coll. TT 1: P 1.—June 1921 to March 1923 Chairman, Topographer and Draftsman, and March 1923 to Sept. 1924 and June to Nov. 1925 Instrumentman and Chf. of Party, North Carolina Highway Comm. TT 2.7: SP 0.8: P 1.9.—Nov. 1925 to July 1926 Res. Engr., Mexican National Comm. of Roads, in charge of road and bridge construction on highway, Mexico City to Puebla, being responsible for some location. TT 0.7: P 0.7: RC 0.7: D 0.7.—Sept. 1928 to March 1929 Structural Steel Surveyor, Harris Structural Steel Co., New York City, on survey work for setting grillages in concrete foundations, plumbing work, etc. TT 0.5: P 0.5.—June to Dec. 1929 Location Engr., Latin American Constr. Co., San Jose, Costa Rico, on road, San Jose to Nicaragua. TT 0.5: P 0.5: D 0.5.—Aug. 1926 to Sept. 1928 and March to June 1929 Chf. of location party with duties of Location Engr., and Feb. 1930 to date Chf. Inspector on road and bridge construction, in charge, organizing inspection force and directing operations, Pennsylvania Dept. of Highways, Franklin, Pa. TT 3.9: P 3.9: RC 1.5: D 2.4.—TT 9.3: SP 0.8: P 8.5: RC 2.2: D 3.6. Refers to H. Carrington, C. N. Conner, T. C. Frame, C. L. Mann, J. B. Pridgen, P. K. Schuyler, C. M. Upham.

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(1) TARLETON, COLBY DUTOT, Jun., 2580 Kolowale St., Honolulu, Hawaii. (Elected Aug. 31, 1925.) (Age 30. Born Honolulu, Hawaii.) Licensed Civ. Engr., Territory of Hawaii. 1924 B. A. in C. E., Sanford Univ. TT 4: P 4.—1920 to 1923 (while student) with Davis & Fishborne, Archts., and (3 months) with Eng. Dept., U. S. Navy, at Pearl Harbor.—Sept. 1924 to April 1925 Constr. Engr., J. L. Young Eng. Co., in Honolulu, on wood, concrete and steel work. TT 0.6: P 0.6.—April to July 1925 on road construction, City and County of Honolulu, under City Engr. TT 0.2: P 0.2.—July 1925 to Feb. 1930 with Honolulu Sewer and Water Comm., as Transitman, Chf. of Party and on design of sewer structures and sewer construction, and Feb. 1930 to date with Board of Water Supply of Honolulu on work of

Sewer and Water Comm., since Jan. 1931 being Engr. in charge of sewer projects. *TT 6: P 6: RC 2.9: D 0.5.—TT 10.8: P 10.8: RC 2.9: D 0.5.* Refers to H. A. R. Austin, B. H. Eveleth, A. R. Keller, J. F. Kunesch, G. K. Larrison, F. Ohrt.

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(2) TRAPP, ARTHUR JOHN, Jun., Congress Sq. Hotel, Portland, Me. (Elected July 16, 1928.) (Age 30. Born Grand Rapids, Mich.) 1927 B. S. in Civ. Eng., Univ. of Mich. *TT 4: P 4.*—April 1920 to July 1922 with Benzie Consolidated Telephone Co. on construction, maintenance and administration as Repairman, Lineman and (after July 1921) in charge of plant. *TT 1.1: SP 1.1.*—Oct. 1924 to July 1927 Student Asst., Coll. of Eng., Univ. of Michigan, in charge of Blue Printing Dept.—Summer 1926 with R. A. Mercier, cost engineering work on monolithic sewers and water-main laying in Ann Arbor and Detroit, Mich.—June to Nov. 1927 Res. Engr. with Menefee & Dodge, Engrs., on small water main (\$50 000), Rochester, Mich., and (about 1 month) on precast concrete pipe storm sewer (\$100 000), Ann Arbor, Mich. *TT 0.4: P 0.4: RC 0.4.*—Nov. 1927 to April 1931 Constr. Engr., Dept. of Water Supply, Pontiac, Mich., in administrative charge of engineering for construction of extensions (\$850 000) to water production, pumping and distribution systems, including estimates, plans, specifications and contracts for construction of water mains, wells and small pumping-station structures, etc., negotiations of rights-of-way, inspection and engineering supervision of construction, conducting pressure, flow and leakage tests, surveying and mapping entire distribution system, designing main extensions, wells, underground pumping-station vaults, and standards for design and construction, etc. *TT 3.5: P 3.5: RC 3.5: D 0.5.*—April 1931 to date Asst. Engr.-Foreman, Dept. of Commerce, Lighthouse Service, First Dist., Portland, Me., in responsible charge of construction of steel sheet-piling wharf, dredging channel and hydraulic filling (\$200 000) for new lighthouse depot, South Portland, Me. *TT 0.2: P 0.2: RC 0.2.—TT 9.2: SP 1.1: P 8.1: RC 5.1: D 0.5.* Refers to A. J. Decker, R. A. Dodge, W. C. Hoad, G. D. Kennedy, F. N. Menefee, F. C. Taylor, C. O. Wisler.

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(1) WEINMAN, IRVING MARTIN, Jun., 617 West One Hundred Forty-First St., New York City. (Elected Oct. 10, 1927.) (Age 27. Born New York City.) 1926 C. E., Cornell Univ. B. S., Coll. of City of N. Y. *TT 4: P 4.*—March to Nov. 1926 with C. Meads & Co., as Asst. Supt. and Supt. on B. M. T. subway-station construction, alteration and finish. *TT 0.5: SP 0.2: P 0.3.*—Nov. 1926 to Jan. 1929 Constr. Engr., Leonard Paving Co., New York City, on construction of New Jersey Plaza, Holland Vehicular Tunnel and various municipal and state paving operations, in responsible charge of engineering details for contractor. *TT 2.2: P 2.2: RC 1.2.*—Jan. 1929 to April 1930 Constr. Engr., Carbloc Paving Corporation, Brooklyn, N. Y., on bituminous pavements in Greater New York and Long Island, in responsible charge of all field, office and plant engineering details on contracts, also in charge of construction of asphalt plant. *TT 1.2: P 1.2: RC 1.*—April to July 1930 Constr. Engr. and Supt. of Constr., Fredburn Constr. Co., New York City, building construction in Westchester County, N. Y. and on construction of foundations, Brooklyn Central Library. *TT 0.2: P 0.2: RC 0.2.*—July 1930 to date Asst. to Chf. Engr., Thompson, Leopold, Fredburn Eng. Co., Contrs., New York City, on subway construction, Board of Transportation Contract, Route 109, Sec. 3, on engineering layout, lines and levels, etc., in addition to construction operations. *TT 1: P 1: RC 1.—TT 9.1: SP 0.2: P 8.9: RC 3.4.* Refers to F. A. Barnes, J. Feld, H. L. King, C. Meads, C. L. Walker.

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(8) WHITE, HERBERT LeROY, Jun., 604 West Nevada St., Urbana, Ill. (Elected Nov. 15, 1926.) (Age 30. Born Little Rock, Ark.) 1924 B. S. in Chemistry, and 1926 B. S., Univ. of Ill. *TT 4: P 4.*—Summers 1923 and 1924 Inspector of pavements, successively for Dickinson & Watkins, Little Rock, Ark. and Mississippi County Road Impvt. Dist. No. 1, Osceola, Ark.—June 1926 to date Asst. Engr., State Water Survey, collecting information for study of ground-water resources and in charge of collection of precipitation and runoff data for six impounding reservoirs. *TT 5: P 5: RC 2: D 0.5.—TT 9: P 9: RC 2: D 0.5.* Refers to H. E. Babbitt, M. L. Enger, W. D. Gerber, G. C. Habermeyer, G. W. Pickels, C. C. Wiley.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.